NAD

SERVICE MANUAL

117/917 WITH TUNER AV STEREO PREAMPLIFIER

SERVICE SAFETY PRECAUTIONS (UL)

1. Use exact replacement parts for critical locations marked "⚠"
2. Return lead dress to original position and re-install protective covers.
3. Before returning to customer, test for shock hazard; use either mothod A or B:

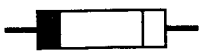
A. Leakage test "cold":
   1. Unplug the AC cord; turn power switch ON.
   2. Connect one lead of High Voltage Insulation Tester to both prongs of the AC plug.
   3. Touch other lead to all exposed metal parts.
   4. Impedance measurement must be 0.3-5.0 Megohms.

B. Leakage test, "live" :
   1. Plug unit directly into the AC outlet: do not use isolation transformer.
   2. Connect one lead of the Leakage Current Tester to earth ground.
   3. Touch other lead to all exposed metal parts.
   4. Leakage measurement must be less than 0.5 milliamps.

117
917 WITH TUNER
AV STEREO PREAMPLIFIER

SAFETY INFORMATION

1. Replacing the fuses



This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Reference No	Part Number	Description
F101-F102*AH	5120-0010-0	Fuse 250V 800mA Time Lag UL/CSA.
F104*AH	N51005010-1A	Fuse 250V 500mA Slow Blow UL/CSA.
F101-F102*B,C	5120-0011-0	Fuse 250V 800mA Time Lag LBC VDE/SEMKO.
F104*B,C	N51005010-1B	Fuse 250V 500mA Slow Blow LBC VDE/SEMKO.

NOTE :
- <*AH > : USA, CANADIAN MODEL ONLY.
<*B >: UK MODEL ONLY.
<*C > : EUROPEAN MODEL ONLY.

2. Safety-check out

(Only U.S.A. model)
After correcting the original service problem perform the following safety check before releasing the set to the customer.
Connect the insulating-resistance tester between the plug of power supply cord and the screw on the back panel.
Specifications : 3.3 Mohm±10% at 500V.

CONTENTS

DESCRIPTION	PAGE
SPECIFICATIONS	4-8
REAR PANEL / FRONT PANEL VIEW	9-10
WIRING DIAGRAM	11-12
DISASSEMBLY INSTRUCTIONS	13
ADJUSTMENT POINTS DIAGRAM	14
ALIGNMENT PROCEDURE	15-17
FUNCTIONAL TEST	18
PCB LAYOUT	19-24
SCHEMATIC DIAGRAM	25-39
IC BLOCK DIAGRAM	40-50
EXPLODED VIEW	51-52
EXPLODED VIEW PARTS LIST	53-55
ELECTRICAL PARTS LIST	56-64
PACKING DIAGRAM	65
PACKING LIST	66

SPECIFICATIONS

TUNER SPECIFICATION (For 917 Only)

Note: For FM tuner, the input voltage is expressed as the reading in open-circuit voltage of 75-ohm source impedance. The unit of the input voltage is in dBμ, which is expressed as a relative magnitude in dB, using 1μV as the reference voltage.

There are two types of tuner front-end modules used in the FM tuner circuit, the AH version uses A16, while the others use G55 or G58 (G58 is a revised G55). Hence, the specification between the two types are different. For the AM tuner, although there are two types of channel spacings between countries, the specification is in general the same.

FM BAND SPECIFICATION

Frequency Range 87.5 ±0.02 MHz TO 108 ±0.02 MHz

		FREQ	UNIT	LIMIT	
				AH	C,B,B1
Input sensitivity (1kHz, 3% THD)	MONO	98MHz	dBμ	≤ 8	≤ 20
50dB quieting	MONO	98MHz	dBμ	≤ 16	≤ 24
	STEREO	98MHz	dBμ	≤ 34	≤ 38
60dB quieting	MONO	98MHz	dBμ	≤ 24	≤ 34
	STEREO	98MHz	dBμ	≤ 42	≤ 48
S/N RATIO (60dBμ IHF wtd)	MONO	98MHz	dB	≥ 76	≥ 76
	STEREO	98MHz	dB	≥ 70	≥ 65
THD (60dBμ)	MONO	98MHz	%	≤ 0.25	≤ 0.25
	L + R STEREO	98MHz	%	≤ 0.25	≤ 0.25
	L – R STEREO	98MHz	%	≤ 0.15	≤ 0.20
IF Rejection	(10.7MHz)	98MHz	dB	≥ 65	≥ 75
Image Rejection	(119.4 MHz)	98MHz	dB	≥ 58	≥ 65
Capture ratio	(40dBμ)	98MHz	dB	≤ 2	≤ 1
AM Supression	(60dBμ)	98MHz	dB	≥ 50	≥ 50
Pilot suppression,	(60dBμ)	98MHz	dB	≥ 55	≥ 55
Frequency response (1kHz Ref, 75usec)		30Hz to 15kHz	dB	0 ±1	
(1kHz Ref, 50usec)		30Hz to 15kHz	dB		0 ±1
Channel Separation (60dBμ)		30Hz	dB	≥ 30	≥ 30
		1kHz	dB	≥ 35	≥ 32
		10kHz	dB	≥ 30	≥ 27
Alternate channel selectivity, (40dBμ)		+400kHz	dB	≥ 55	≥ 65
		–400kHz	dB	≥ 55	≥ 65
Auto-search sensitivity			dBμ	18 ±7	18 ±7
Center tune sensitivity			dBμ	14 ±7	14 ±7
Stereo indicator threshold		OFF	dBμ	18 ±7	18 ±7
		ON	dBμ	21 ±7	21 ±7
Bar graph No.8 sensitivity		dBμ	44±10	44±10	

AM BAND SPECIFICATION, ALL VERSIONS

Frequency Range, AH version 520 kHz ± 2 kHz to 1610 kHz ± 2 kHz, step 10 kHz
C,B & B1 522 kHz ± 2 kHz to 1611 kHz ± 2 kHz, step 9 kHz

	FREQ	UNIT	LIMIT
Input Sensitivity (10% THD)	1000kHz/999kHz	dBμ	≤ 24
S/N @ 2mV(66dBμ)	1000kHz/999kHz	dB	≥ 45
Distortion (30% mod @ 1kHz, 66 dBμ)	1000kHz/999kHz	%	≤ 3
Image Rejection (LO) +2*IF	1900kHz/1899kHz	dB	≥ 30
IF Rejection	450kHz	dB	≥ 35
Selectivity +/– 10kHz ± 9kHz (avg 2)		dB	≥ 20
Autosearching Sensitivity	1000kHz/999kHz	dBμ	31 ±7
Bar Graph no.8 Sensitivity	1000kHz/999kHz	dBμ	39 ±7

A / V SURROUND TESTING (117/917)

A. A/V STEREO.

PARAMETER	SPEC	INPUT MODE	INPUT LEVEL	FREQ	OUTPUT	OUTPUT LEVEL	PROCEDURE
THD	≤ 0.03 %	L=R	2 V	1 kHz	L, R	2 V	Measure THD.
120 Hz	≤ 0.03% ≤ 0.04%	L=R	500 mV 1.5 V	20 Hz	Sub	500 mV 1.5 V	Adjust subwoofer volume and measure THD.
S/N-AWTD	≥ 90 dB	L, R	500 mV	1 kHz	L, R	500 mV	Remove input signal and connect 1K termination. Measure noise level.
Unweighted	77 dB	L=R		20 Hz	Sub		Adjust subwoofer volume. Remove input signal and connect 1K termination. Measure noise level.
Sensitivity	180 mV ± 20 mV	L, R	–	1 kHz	L, R	1 V	Measure input level at maximum volume setting.
	40 ±5 mV	L=R	–	20 Hz	Sub	1 V	Measure input level at maximum volume setting.
Maximum input level	≥ 5 V	L, R	–	1 kHz	L, R	–	Volume set at unity gain. Increase input level until THD=0.1%. Measure input level.
Maximum	Front ≥ 5 V	L=R	500 mV	1 kHz	L, R	–	Adjust volume until THD=0.1%. Measure output level.
Output level	Headphone ≥ 5	L=R	500 mV	1 kHz	H/P		Adjust volume until THD=0.1% with 600 ohms load.Measure output level.

PARAMETER	SPEC	INPUT MODE	INPUT LEVEL	FREQ	OUTPUT	OUTPUT LEVEL	PROCEDURE
Channel separation	≥ 70 dB ≥ 48 dB	L, R	2 V	1 kHz 10 kHz	L, R	2 V	Measure output level at unselected output channel.
Crosstalk	≥ 70 dB ≥ 48 dB	L=R	2 V	1 kHz 10 kHz	L, R	2 V	Measure output level at unselected source input.
	≥ 40 dB	L=R	2 V	1 kHz	L, R	2 V	Measure output level at tape record with input signal at its tape input.
Gain tracking	at 0 dB ≤ 1 -30 dB ≤ 3 -60 dB ≤ 3	L=R	–	1 kHz	L, R	2 V	From maximum, reduce volume by 60 dB and measure by difference in level between L and R.
Freq response on	0 dB ±0.5	L=R	500 mV	20 Hz-20 kHz	L, R	500 mV	Measure rise and drop in output level with tone defeat on and off.
off	0 dB ±0.7						
Flat	0 dB ±1				Sub		Adjust subwoofer volume. Measure rise and drop of output level with 20 Hz reference.
60 Hz	-3 dB ±1			60 Hz			
120 Hz				120 Hz			
Bass eq.	+3 dB ±1	L=R	500 mV	50 Hz	L, R	500 mV	Measure rise in output level after switching bass eq. on.
Bass Treble	10 dB ±1.5 7 dB ±1.5	L=R	500 mV	50 Hz 10 kHz	L, R	500 mV	Measure rise and drop of output level after adjusting controls to maximum and minimum.

B. PRO-LOGIC (117/917)

PARAMETER	SPEC	INPUT MODE	INPUT LEVEL	FREQ	OUTPUT	OUTPUT LEVEL	PROCEDURE
CDR	5dB ± 1dB 12dB ± 1dB 0dB ± 1dB	L=R	177 mV 60 mV 345 mV	1 kHz	L, R	500 mV	Measure rise in output after switching CDR on and at Maximum volume setting.
Sibilance	-3dB ± 1dB	L=R	500 mV	7 kHz	L, R	500 mV	Measure drop in output after switching sib. on.
Channel separation	45 dB 30 dB 35 dB	L, R	500 mV	1 kHz	R, L C SL, SR	500 mV	Measure output at unselected output channel.
	30 dB	L=-R	345 mV	1 kHz	L, R C		Measure output at unselected output channel.
	20 dB 30 dB	L=R	345 mV	1 kHz	L, R SL, SR		Measure output at unselected output channel.

PARAMETER	SPEC	INPUT MODE	INPUT LEVEL	FREQ	OUTPUT	OUTPUT LEVEL	PROCEDURE
Freq response	0 dB ±0.8	L, R	500 mV	20 Hz-20 kHz	L, R	500 mV	Measure rise and drop of output level with 1 kHz reference.
	0 dB ±0.5	L=R	345 mV	300 Hz-20 kHz	C		Adjust center volume. Measure rise and drop of output level with 1 kHz reference.
-3dB point	70 Hz-120 Hz						Get frequency when level drops by 3 dB with 1 kHz reference.
	-1 dB ±1	L=-R		30 Hz	SL, SR		Adjust surround volume. Measure drop in level at 30 Hz.
-3dB point	7 kHz ±1						Get frequency when level drops by 3 dB with 1 kHz reference.
THD	≤ 0.15% ≤ 0.4%	L, R	500 mV 1.5 V	1 kHz	L, R	500 mV 1.5 V	Measure THD.
Normal	≤ 0.1% ≤ 0.4%	L=R	345 mV 1.5 V		C		Adjust center volume and measure THD.
	≤ 0.5% ≤ 1.0%	L=-R			SL, SR		Adjust surround volume and measure THD.
S/N- AWTD	≤ 80 dB	L, R	500 mV	1 kHz	L, R	500 mV	Remove input signal and connect 1K termination. Measure noise level.
Normal	≤ 75 dB	L=R	345 mV		C		Adjust center volume. Remove input signal and connect 1K termination. Measure noise level.
	≤ 70 dB	L=-R			SL, SR		Adjust surround volume. Remove input signal and connect 1K termination. Measure noise level.
Sensitivity	90 ±10 mV	L, R	–	1 kHz	L, R	500 mV	Measure input level at maximum volume setting and +6 trim level.
Phantom	90 ±10 mV	L=R			L, R		
Normal	7.5 ±1.5mV				C		
4 channel	13 ±2 mV	L=-R			SL, SR		
3 channel	130 ±10mV				L, R		

C. SOUND SPACE

INPUT			OUTPUT (mV)											
			STADIUM				HALL				CLUB			
MODE	LEVEL	FREQ.	L	R	C	S	L	R	C	S	L	R	C	S
L	125 mV	1 kHz	1000 0.2%	< 200	< 20	2600 ±10%	700 0.2%	< 20	< 20	< 20	1050 0.2%	< 200	< 20	< 20
R	125 mV	1 kHz	< 200	1000 0.2%	< 20	1600 ±10%	< 20	700 0.2%	< 20	< 20	< 200	1050 0.2%	< 20	< 20
L = R	125 mV	1 kHz	800 0.2%	8000. 0.2%	880 0.2%	4500 ±10%	< 100	< 100	880 0.2%	< 20	1130 0.2%	1130 0.2%	880 0.2%	< 20
L = -R	125 mV	1 kHz	1150 0.2%	1150 0.2%	< 20	2500 ±1000	< 20	< 20	< 20	270 0.4%	950 0.2%	950 0.2%	< 20	650 0.4%

PROCEDURE:

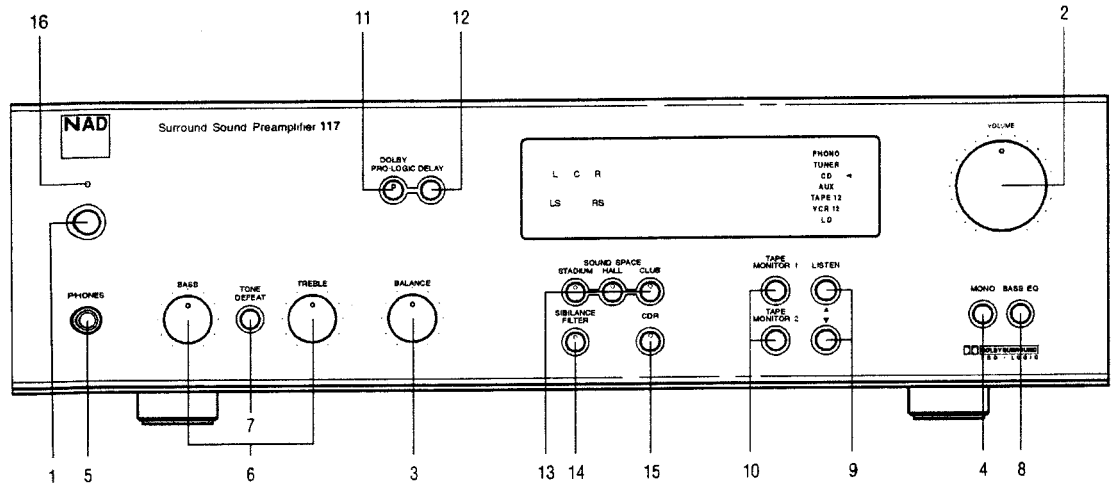
1. Set center switch to Normal and Surround Mode switch to 4 channel.
2. Set Delay to 15 msec.
3. Set master volume to maximum while center volume and surround volume are at "0" setting.
4. Measure output level and THD on each channel. There is no need to measure THD for levels below 200 mV.
5. Tolerance for output levels is ±20% unless otherwise specified.
6. For stadium surround outputs with L, R and L=R inputs, the input signal is 100 mV 40 Hz and the surround volume is set at "+6".
7. For stadium surround output with L=-R input, the input signal is 100 mV of pink noise (off-tuned tuner output) and the surround volume is set at "+6".

D. DIMENSIONS

Net Weight : 6.7 kg, 14.74 lb
Shipping Weight : 8.3 kg, 18.26 lb
Dimensions : 435 x 115 x 350 mm

117 REAR PANEL / FRONT PANEL VIEW

FRONT PANEL

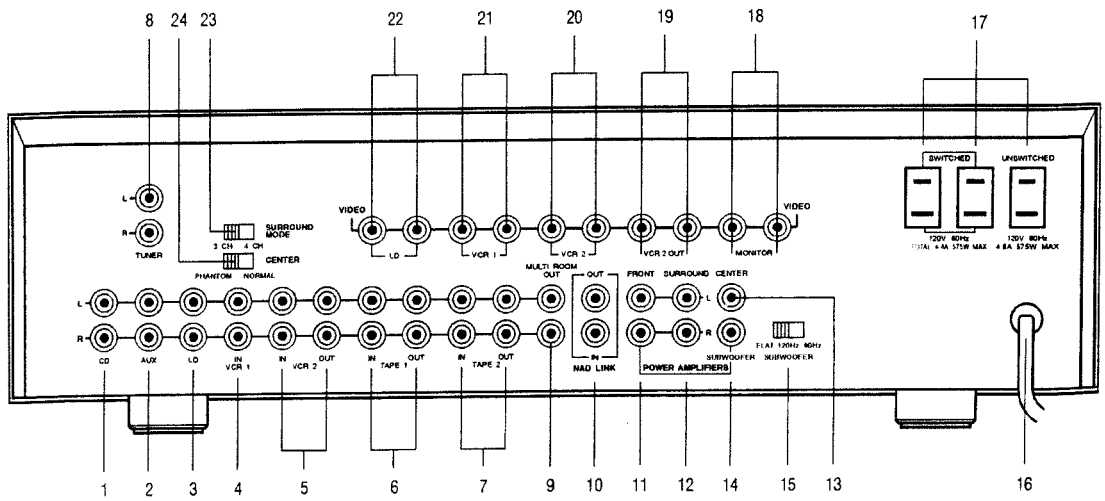


1. POWER
2. VOLUME
3. BALANCE
4. MONO
5. HEADPHONE SOCKET
6. BASS & TREBLE CONTROLS
7. TONE DEFEAT
8. BASS EQ
9. LISTEN
10. TAPE MONITOR 1 & 2
11. DOLBY PRO LOGIC
12. DELAY
13. SOUND SPACE
14. SIBILANCE FILTER
15. CDR
16. POWER LED

The lightning flash with arrowhead, within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

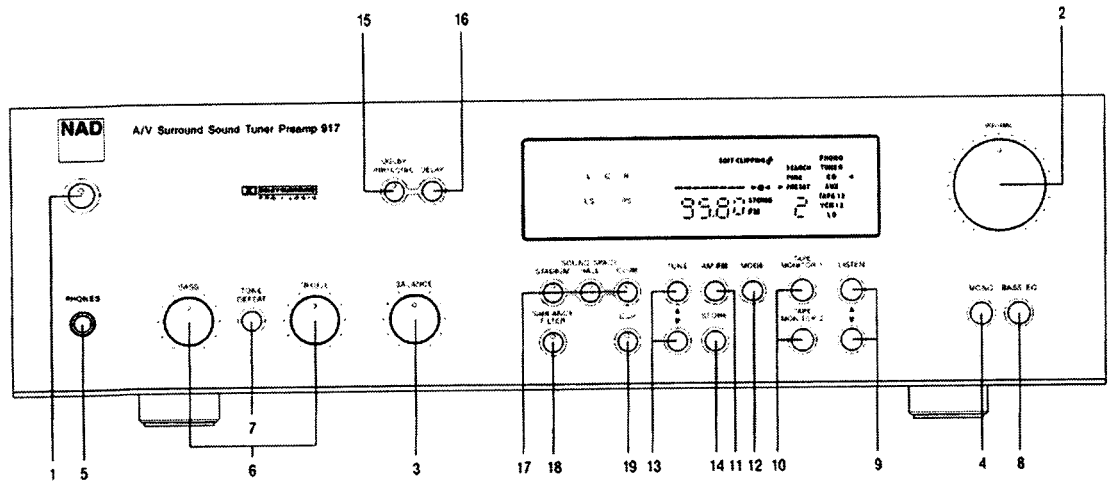
REAR PANEL CONNECTIONS



1. CD INPUT
2. AUX INPUT
3. LD INPUT
4. VCR 1
5. VCR 2
6. TAPE 1
7. TAPE 2
8. TUNER INPUT
9. MULTI ROOM OUT
10. NAD LINK IN OUT
11-14. POWER AMPLIFIERS
15. SUBWOOFER SELECTOR
16. AC POWER CORD
17. AC OUTLETS (US version only)
18. MONITOR VIDEO OUTPUT
19. VCR2 VIDEO OUTPUT
20-22. VIDEO INPUTS
23. DOLBY 3CH/4CH SURROUND SELECTOR
24. CENTER PHANTOM/ NORMAL SELECTOR

917 REAR PANEL / FRONT PANEL VIEW

FRONT PANEL



1. POWER
2. VOLUME
3. BALANCE
4. MONO
5. HEADPHONE SOCKET
6. BASS & TREBLE CONTROLS
7. TONE DEFEAT
8. BASS EQ
9. LISTEN
10. TAPE MONITOR 1 & 2
11. AM/FM SELECTOR
12. TUNING MODE
13. TUNE MODE
14. STORE MODE
15. DOLBY PRO LOGIC
16. DELAY
17. SOUND SPACE
18. SIBILANCE FILTER
19. CDR

The lightning flash with arrowhead, within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.

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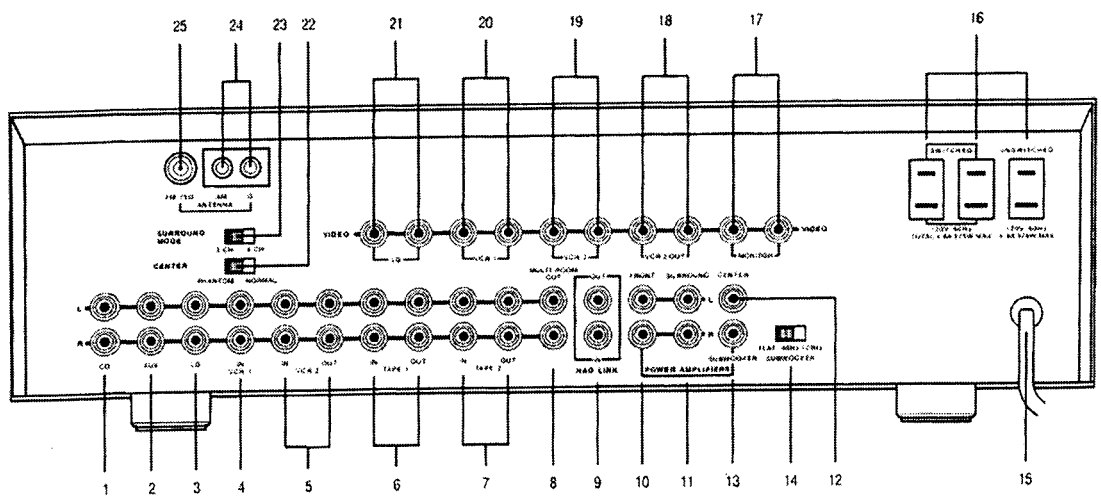
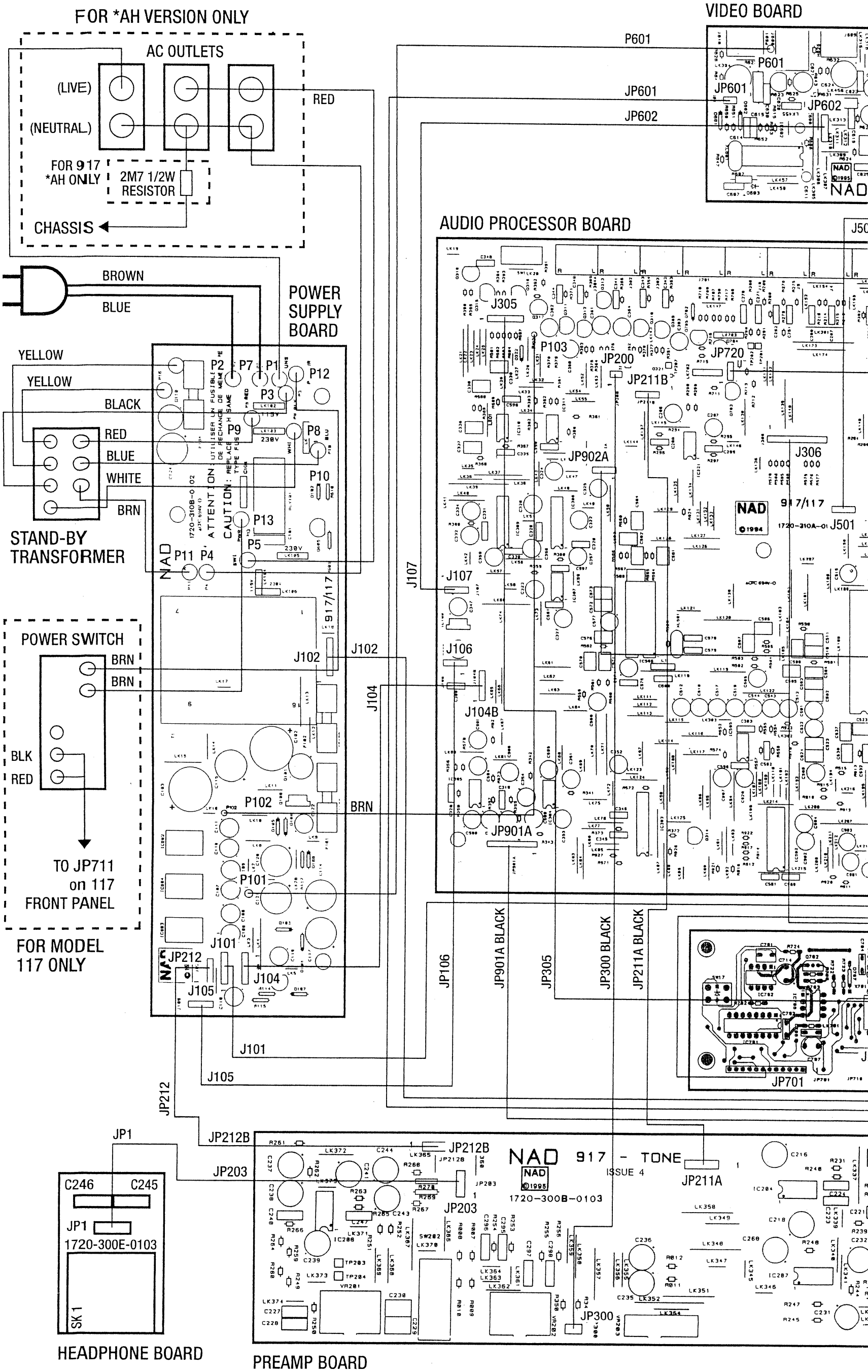
REAR PANEL CONNECTIONS



1. CD INPUT
2. AUX INPUT
3. LD INPUT
4. VCR 1
5. VCR 2
6. TAPE 1
7. TAPE 2
8. MULTI ROOM OUT
9. NAD LINK IN OUT
10-13. OUTPUTS TO POWER AMPLIFIERS
14. SUBWOOFER SELECTOR
15. AC POWER CORD
16. AC OUTLETS (US version only)
17. MONITOR VIDEO OUTPUT
18. VCR 2 VIDEO OUTPUT
19-21. VIDEO INPUTS
22. CENTER PHANTOM/NORMAL SELECTOR
23. SURROUND MODE 3CH/4CH SELECTOR
24. AM ANTENNA
25. FM ANTENNA

WIRING DIAGRAM



RAM

VERSION ONLY

AC OUTLETS

RED

7 1/2W
SISTOR

POWER
SUPPLY
BOARD

P2 P7 P1 P12 P3 P9 P8 P10 P13 P5 P11 P4

P102

P101

J101

J102

J104

J105

J106

J107

J212

BRN

VIDEO BOARD

P601

JP601

JP602

AUDIO PROCESSOR BOARD

J501

J305

P103

JP200

JP720

JP211B

JP204

JP902A

J306

JP201

JP710

JP703

JP701

JP704

JP705

JP702

JP706

JP901A BLACK

JP305

JP300 BLACK

JP211A BLACK

JP214 BLACK

JP212B

JP203

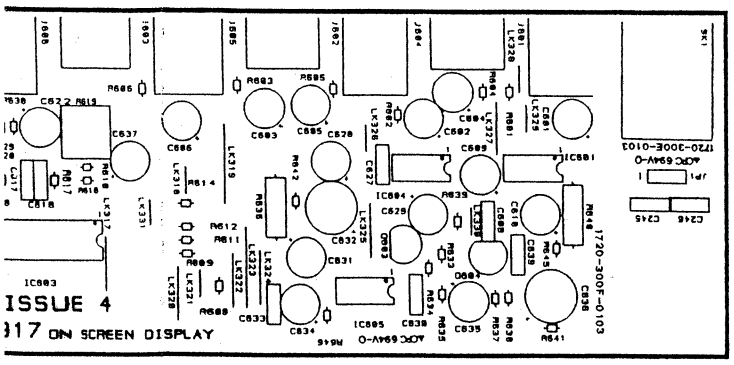
JP211A

JP214

JP210A

PREAMP BOARD

** NOTE: WIRES



SURROND/CENTER
SWITCH BOARD

1720-300G-0103

SW901 SW902

JP905A

JP905A

FOR 117 ONLY

TUNER I/P BOARD

R L

R748 R739

R742 R741

C713 JP709 C712

P701 P709

TO CHASSIS

JP709 BLACK

FOR 917 ONLY

FM ANTENNA
TERMINAL GROUND

GND

TUNER BOARD

SHIELD WIRE

TUNER FRONT
END CASE

NAD 917 TUNER ISSUE 3

JP701

JP205

JP205

JP701

JP202
BLACK

JP202

L706/L707

GREEN

JP401

1720-300A-0103

MOUNTING HOLE

JP401

NAD MAIN ISSUE 5

JP204

JP201

J904A

J902A

917 FRONT
PANEL

ISSUE 5

JP703

JP707

JP704 JP705 JP702 JP706

NAD 917 FRONT PANEL
ISSUE 5

C COPYRIGHT NAD ELECTRONICS LTD 1994 1720-320A-0001

FRONT PANEL BOARD

J904A

IC901A

J902A

1720-300D 0103

J903A
BLACK

J903A

J901A

VOLUME BOARD

J901A BLACK

JP214

JP214 BLACK

JP210A

JP210A

JP210E

JP210E

SW204 SW201

JP213

PUSH-SWITCH BOARD

JP213

**** NOTE: WIRES, UNLESS SPECIFIED ARE WHITE COLOUR.**

DISASSEMBLY INSTRUCTIONS

1. Remove machine screws M4.0 x 6.0 (① to ⑥) from the side panels.
   Remove tapping screw 3.0 x 8.0 (⑦ and ⑧) from the back panel.
   Refer to **Figure No. 1.**

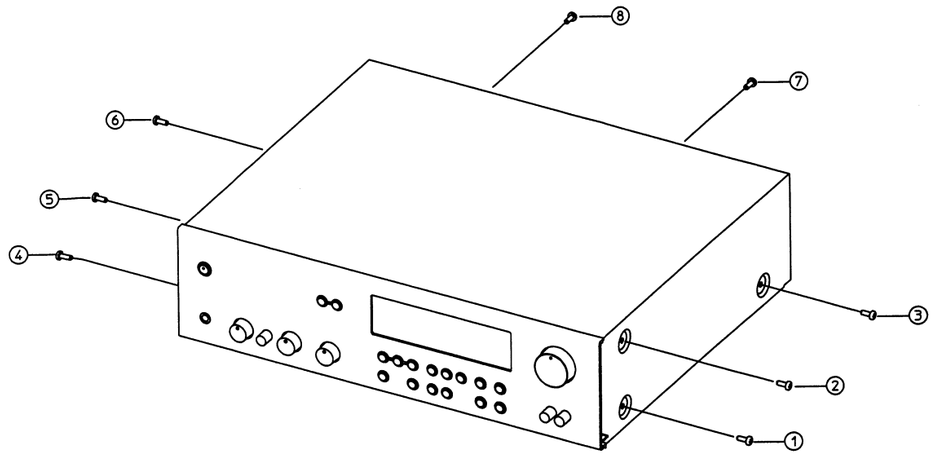


Figure No. 1.

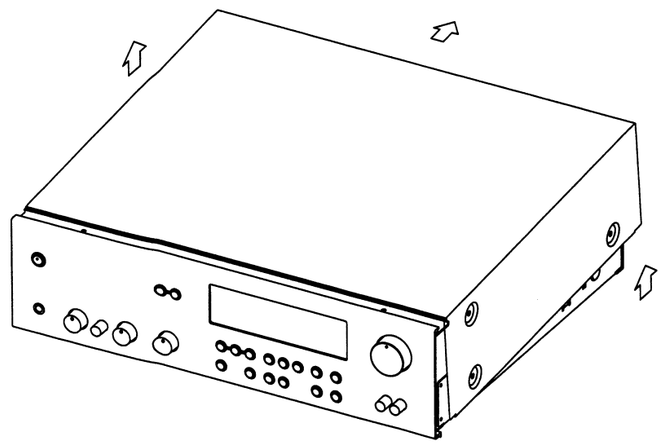
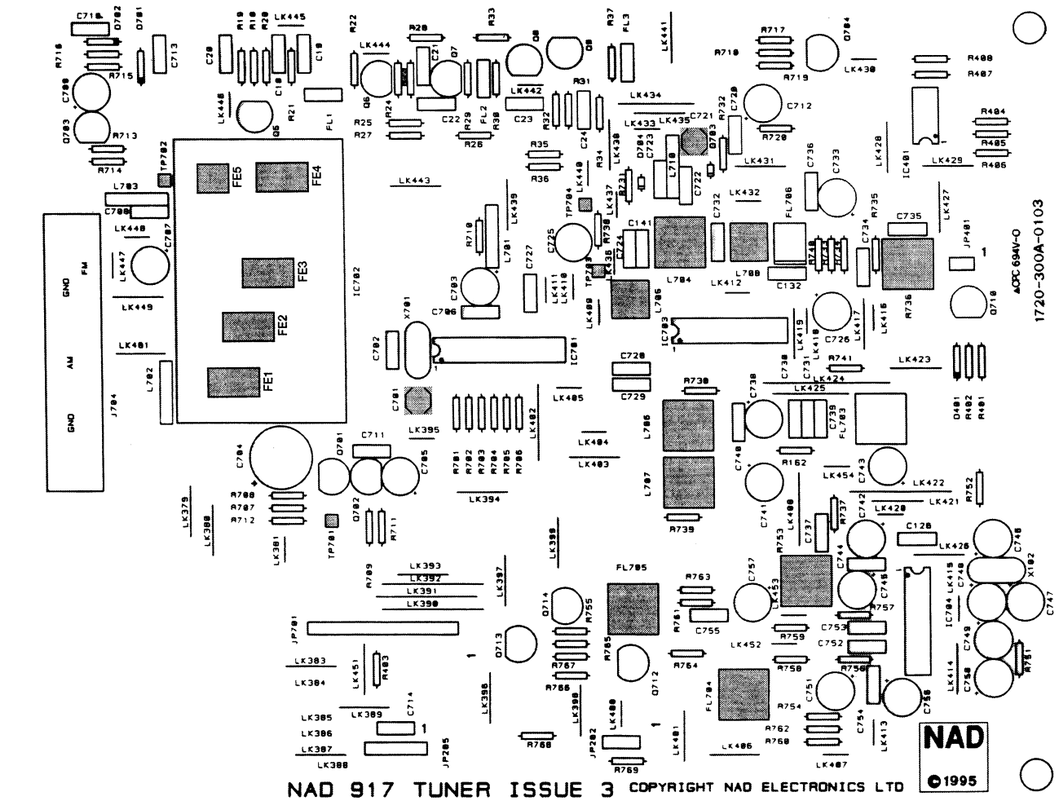


Figure No. 2.

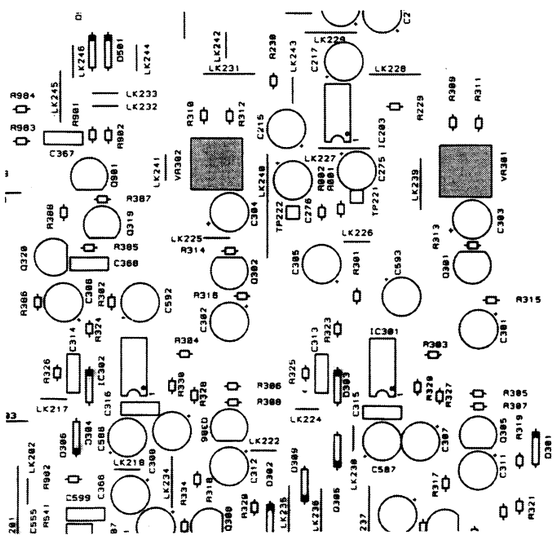
2. Pull both sides of the TOP COVER slightly outwards, tilt approximately 35° and then remove in the direction as shown in **Figure No. 2.**

ADJUSTMENT POINTS DIAGRAM

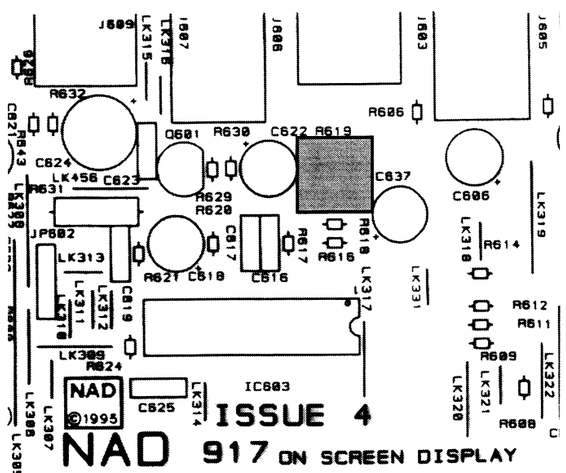
1. TUNER (For 917 Only)



2. CDR



3. OSD



ALIGNMENT PROCEDURES

FM SECTION (For 917 Only)

AF Modulation: 1 kHz, 75 kHz Deviation, MONO Mode
Store Frequency: 98 MHz, 87.5 MHz, 108 MHz, 90 MHz, 106 MHz
RF Level: 75-ohm Impedance, Open circuit

OSCILLATION TUNING VOLTAGE

Connect DVM between TP701 & GND.
For A16 Front-end Module:
Tune to 87.5 MHz, adjust FE4 (osc coil) to read 3 ± 0.5 V.
Tune to 108 MHz, adjust FE4 (osc coil) to read 20.5 ± 0.5 V.
For G55 or G58 Front-end Module:
Tune to 87.5 MHz, adjust FE4 (osc coil) to read 1.6 ± 0.5 V.
Tune to 108 MHz, adjust FE4 (osc coil) to read 8.0 ± 0.5 V.

I.F.

Connect DVM between TP703 & TP704.
Apply 10.7 MHz, 90 dBμ via 1 kilo ohm resistor to TP702.
Adjust L706 for 0 ± 50mV reading on DVM.
Adjust L707 for minimum distortion (THD).
Repeat adjustment until no further improvement.

SYNTHESIZER I.F. TRACKING

Maintain connection of DVM across TP703 & TP704.
Disconnect 10.7 MHz tap to TP702.
Apply 98 MHz, 60 dBμ to antenna input.
Tune to 98 MHz.
Adjust C701 for 0 ± 20 mV reading on DVM.
Fine adjust L707 for minimum distortion.
Repeat until no further improvement.

Front-end IF.

Connect DVM between LK391 and ground
Turn R736 fully counter clockwise
Apply 98 MHz, 18 dBμ to antenna
Adjust FE5 to obtain maximum reading on DVM.

R.F.

Apply 98 MHz, 7 dBμ for AH, or 21 dBμ for C, to antenna input.
Check THD.
If THD > 3%, adjust FE1, FE2 & FE3 in the front-end module with non-metallic tool for minimum THD.
Check THD at 90 MHz & 106 MHz with 8 dBμ input for AH, or 22 dBμ for C.

FM Stereo: 1 kHz, 67.5 kHz devi., 60 dBμV, Pilot signal 19 kHz, 7.5 kHz devi.

STEREO SEPARATION & PILOT SUPPRESSION

Set modulated signal to Left only.
Adjust R753 for minimum output at right channel.

Set modulated signal to Right only.
Adjust R753 for minimum output at left channel.
Repeat until readings are the same.
Turn off modulating signal, leaving the pilot tone.
Adjust FL704 and FL705 for minimum outputs on right and left channels respectively.

SIGNAL STRENGTH METER

Set L=R, 98 MHz, 66 dBμ.
Adjust R736 until all segments are just on.

AM SECTION (For 917 Only)

AF Modulation: 400 Hz, 30%
For AH Version, store frequencies 603, 999, 1404 kHz.
For C & B Versions, store frequencies 600, 1000, 1400 kHz.
Connect 22 pF ceramic to capacitor between signal generator and antenna terminal.

OSCILLATION TUNING VOLTAGE

Connect DVM between TP701 & GROUND.
Tune to 603/600 kHz.
Adjust L705 for 1.75 ± 0.05 V reading on DVM.

I.F.

Apply 999/1000 kHz, set 45 dBμ to antenna input.
Tune to 999/1000 kHz.
Adjust L708 for maximum output.

R.F.

Apply 603/600 kHz, 45 dBμ.
Tune to 603/600 kHz.
Adjust L704 for maximum output.
Apply 1404/1400 kHz, 45 dBμ.
Adjust C721 for maximum output.
Repeat until no further improvement.

CDR FUNCTION

Apply 177mV to CD input, L-CH only.
Connect AC voltmeter to L & R outputs.
Select CD input and HALL mode.
Switch CDR off.
Adjust main control volume for 500 mV output.
Switch CDR on.
Adjust VR301 for 5 dB increase in output.
Remove L input and connect to R input.
Monitor R output.
Adjust VR302 for 5 dB increase in output.
Repeat if L & R output difference exceeds 0.2 dB.

ON-SCREEN DISPLAY (OSD) FUNCTION

Connect a video generator or any source of composite video signal to LD video input RCA jack.
Connect a video monitor to MONITOR video output RCA jack.
Press TEST once on the remote control (or DELAY continuously on the front panel) for the OSD t
appear in the monitor.
Adjust R619 until OSD becomes stable and at the center of the monitor. The OSD can slightly shi
to the right by a ratio of 2:1.
Press TEST once (or release DELAY) for the OSD to disappear from the monitor.

FUNCTIONAL DESCRIPTION:

TUNING SEARCH (For 917 Only)

1.The following pins are used in finding a station:
STRQ: MCU output
STOUT: MCU output
SIGNAL: MCU output

2. The time it takes to search from 87.5 to 108 MHz at 100 kHz step is approximately 24 seconds, which means that the station check takes 117mS per station.

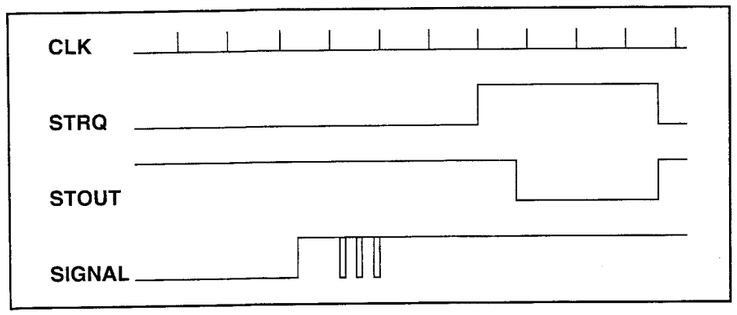
3. After tuning to a station(setting the value for LM7000), the SIGNAL pin is checked by the MCU for 30 µS. If the SIGNAL pin is low, the station search continues. If the SIGNAL pin is high, then the STRQ pin is set high by the MCU.

4. After 135 mS that the STRQ is high, the LM7000 will pull the STOUT pin to logic low for 350 mS to indicate that a station is present and the station search is terminated by the MCU.

5. After the LM7000 has pulled the STOUT pin high, then the MCU will pull the STRQ pin low.

6. After a station is found, the SIGNAL pin is not checked anymore.

Attached is the timimg diagram for reference:



DOLBY PROLOGIC

Dolby Prologic function provides two additional output channels, Center and Surround, which are derived from the two input channels, left and right. When the two channels are in phase, the signal will be passed to the center channel. If only the left channel has signal, the signal will be passed to the left channel without sharing to other channels. Likewise, signal at right channel only would go the right channel. If the signals are out of phase by 180°, the signal is passed to the rear surround channels.

In fact, the surround left channel and the surround right channel are identical. It is better to have two rear speakers at the rear corners for better sound effect.

If the left and right channels are out of phase in between 0° and 180°, the signal will be shared in proportion to the phase between the channels. That is, the out of phase signal between the two front channels will be shared by the rear surround channel. Only the signal which is discrete to left or right channel will be remained in left or right channel.

FUNCTIONAL TEST

MONITOR DISPLAY

Video display from MONITOR output indicates the status of the selected channel as on the panel display. The label on the screen should be adjusted to the center. No distortion should occur with either PAL or NTSC signal. The center of the text label may be allowed to be shifted slightly to the right. The ratio between the distances of the label center to the left and right edges should be less than 2.

SELF TEST - OUTPUTS ONLY

When the test program is selected by pressing the 'TEST' button on the remote control, a sequence of noise signal will be generated from the output channels. The 5 LEDs on the panel will turn on sequentially when the corresponding channel is selected by the test program.

S-VHS TEST

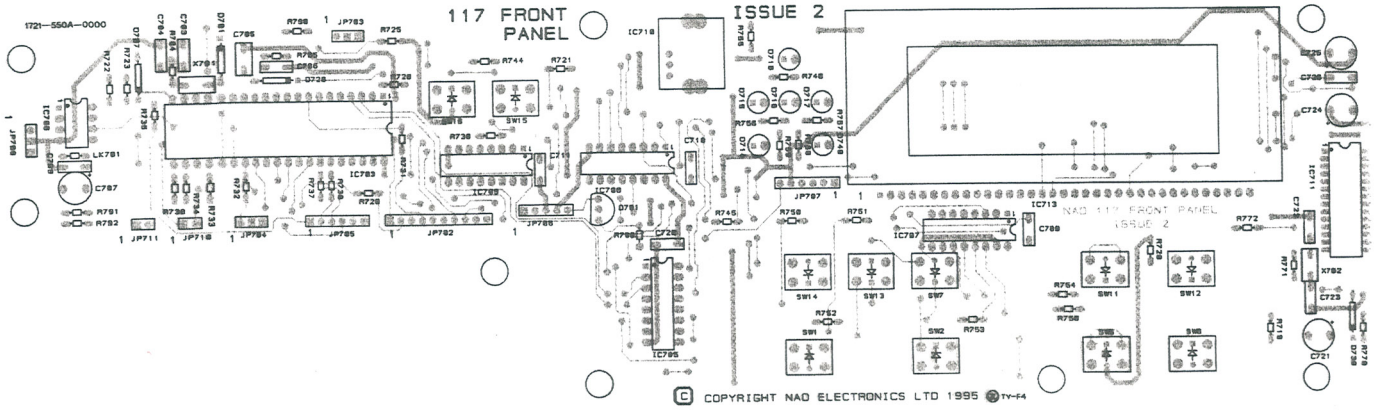
If there is no S-VHS signal available from the video generator, black screen signal with cross and circle pattern may be used. The colour burst is set to 300mVpp and the horizontal synchronous signal is set to 300mVpp also. The signal is fed into both the two SVHS input pins of the selected input channel. Monitor these two SVHS video outputs on the video terminal, one at a time, and check for the stability of the text display.

For better functional check, the outputs at the S-VHS terminal should be monitored with a dual trace oscilloscope and check for any obvious delay between the two colour burst signals. Colour burst and horizontal sync pulse should still be 300mV ± 1 dB on chrominance and luminance channels of SVHS outputs (VCR2 and Monitor).

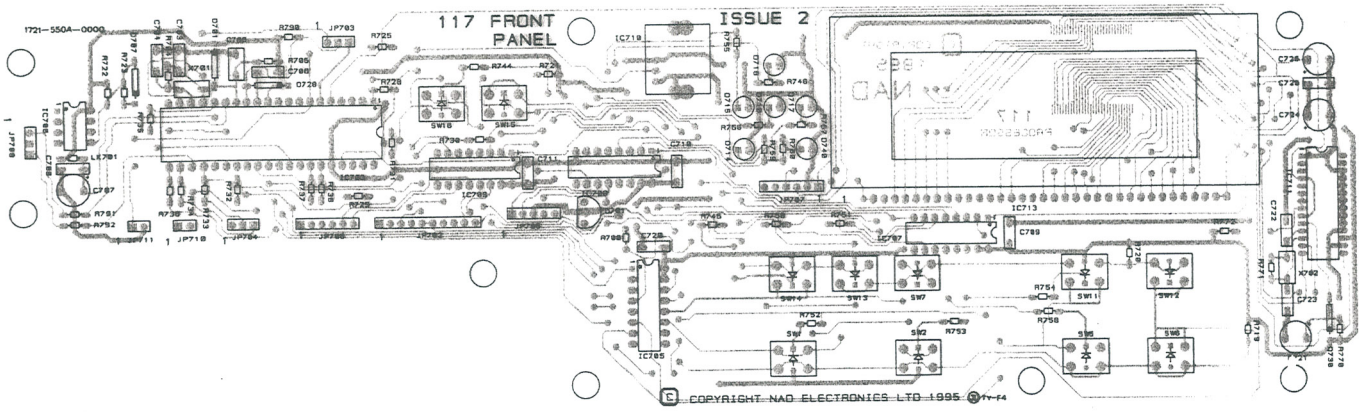
PCB LAYOUT

117 FRONT PANEL/ POWER SWITCH/ TUNER INPUT

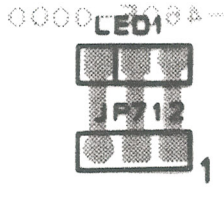
COMPONENT SIDE



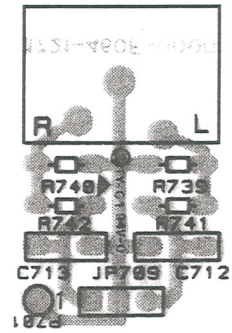
SOLDER SIDE



STANDBY LED

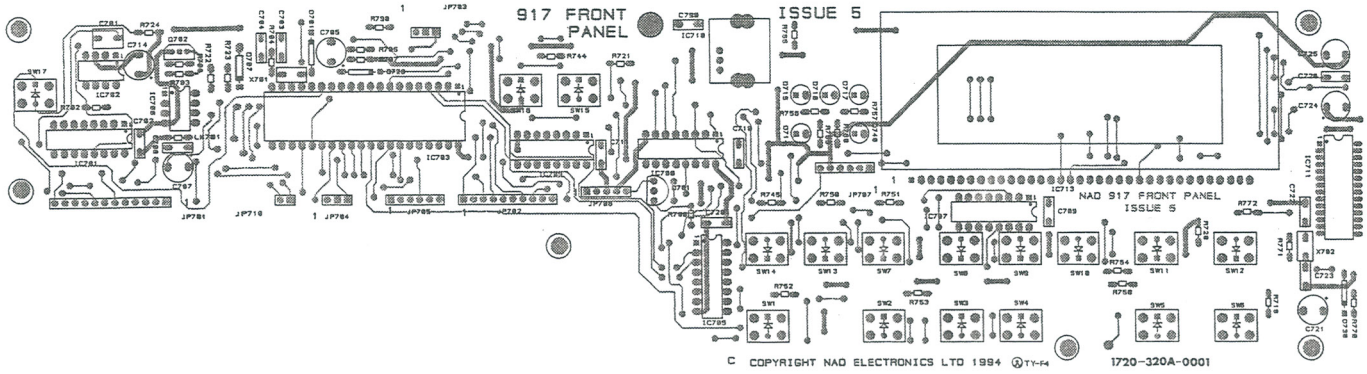


TUNER INPUT

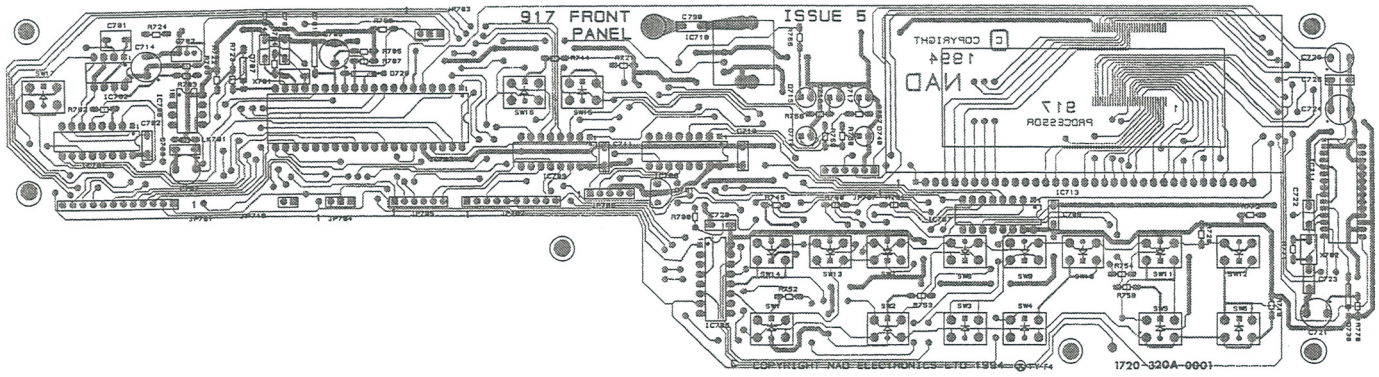


917 FRONT PANEL

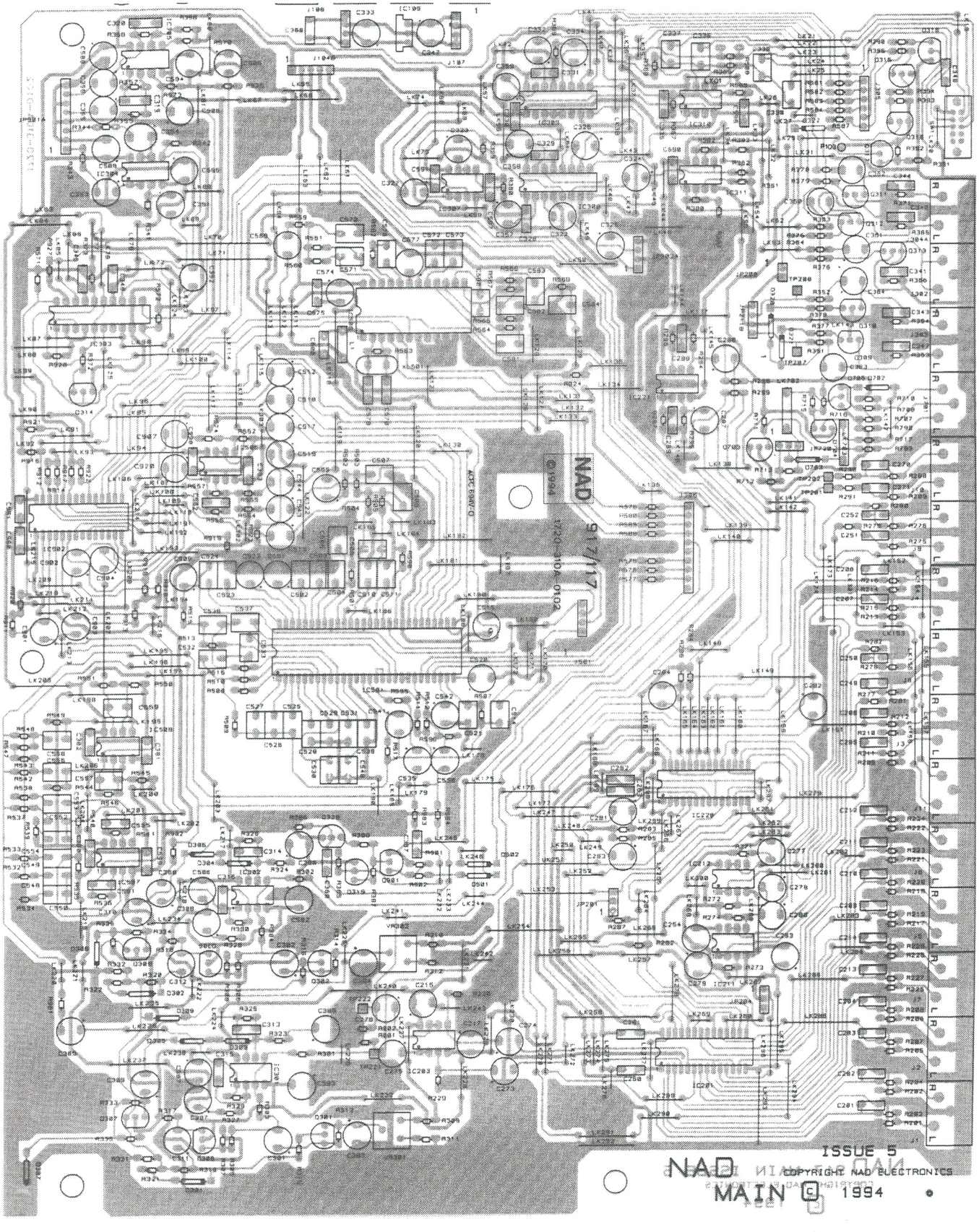
COMPONENT SIDE



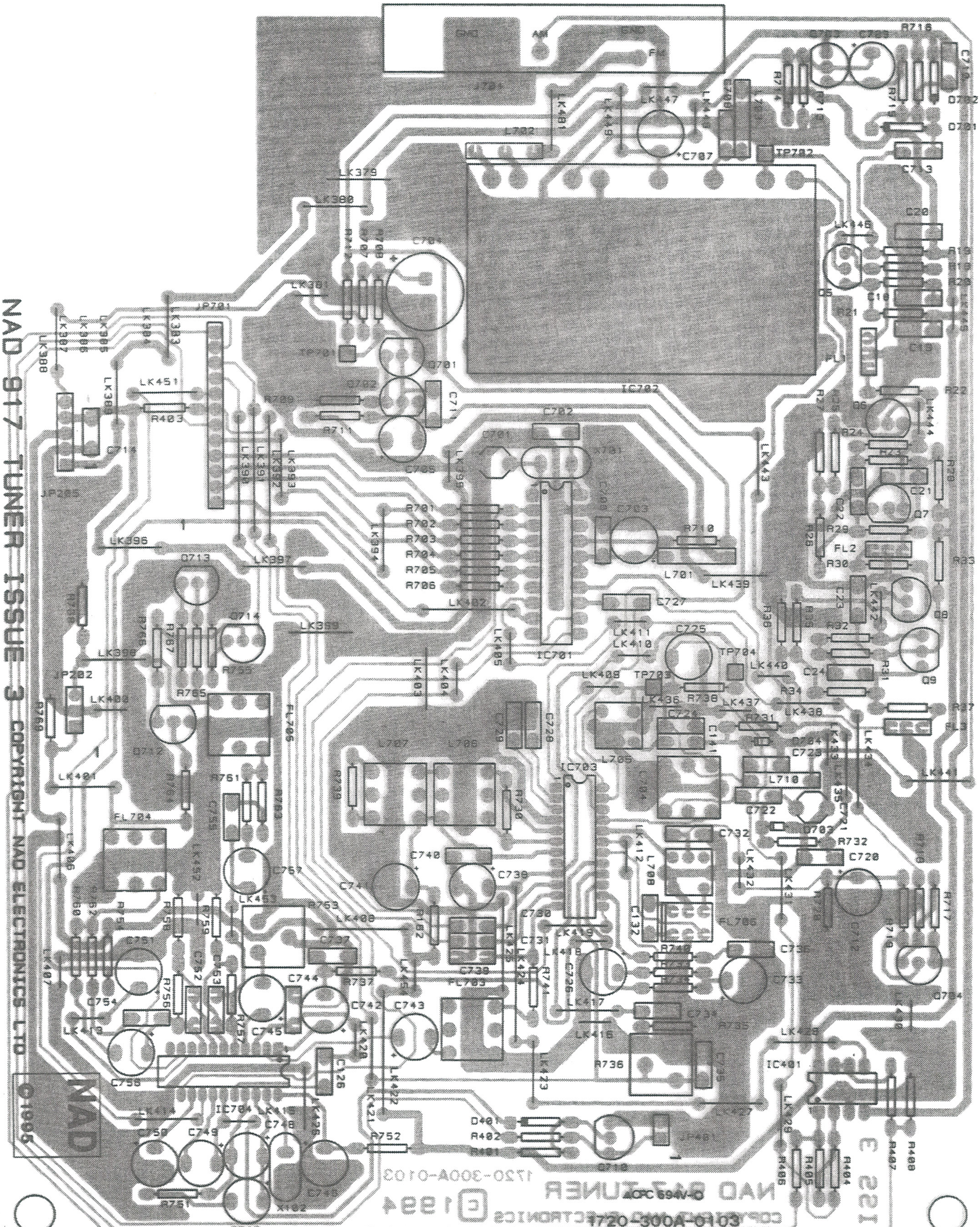
SOLDER SIDE



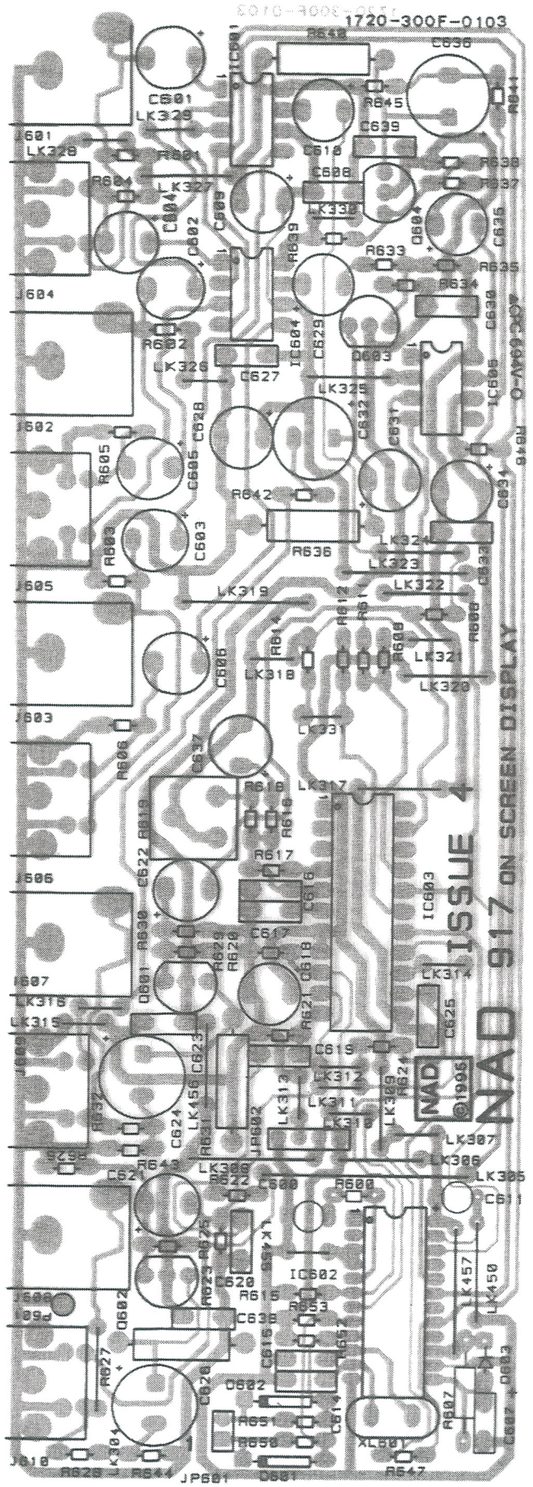
AUDIO PROCESSOR



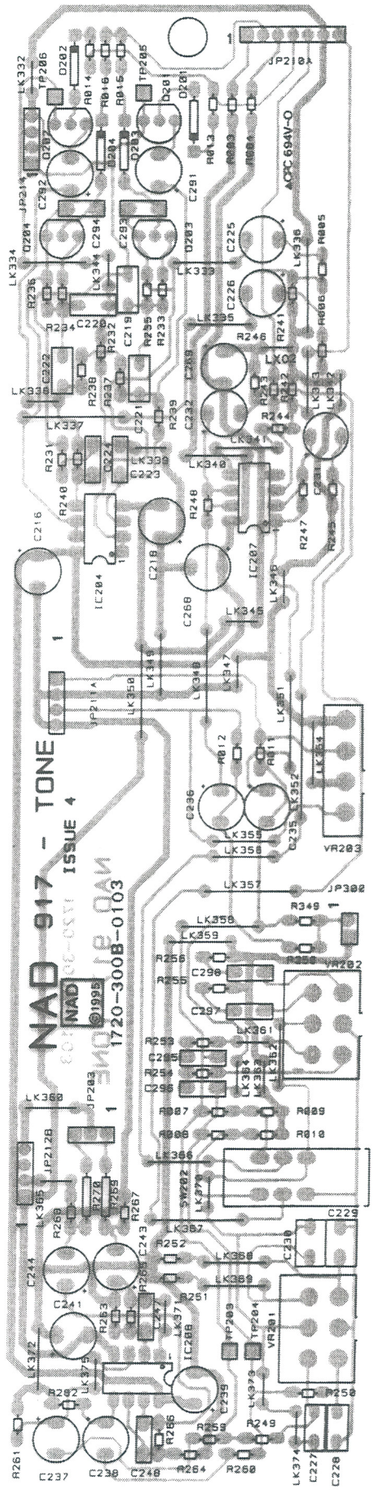
TUNER (For 917 Only)



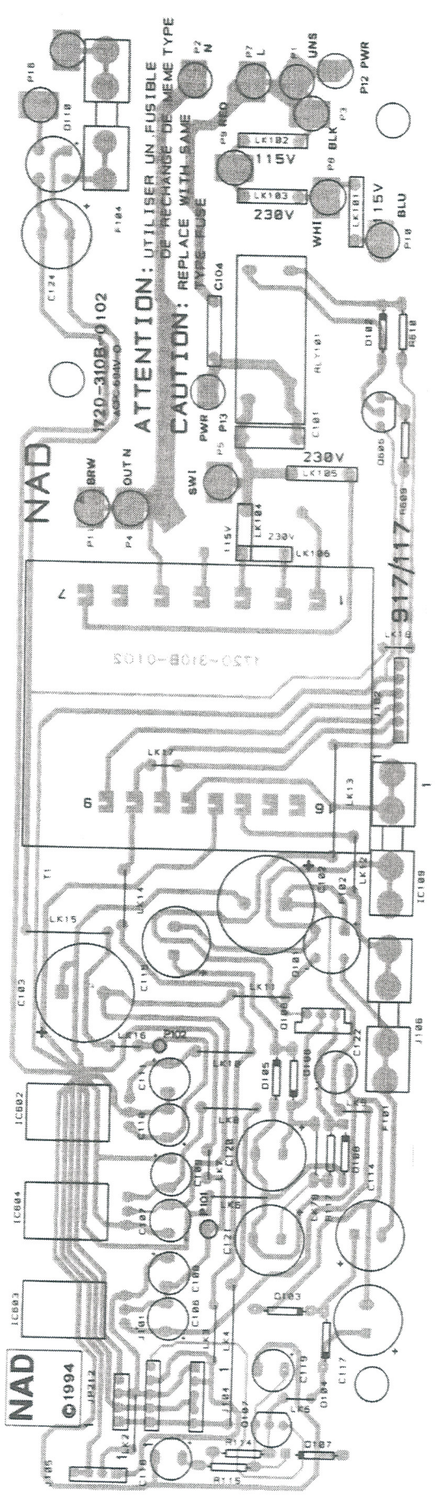
VIDEO



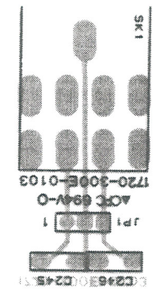
TONE



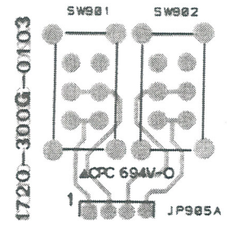
POWER SUPPLY



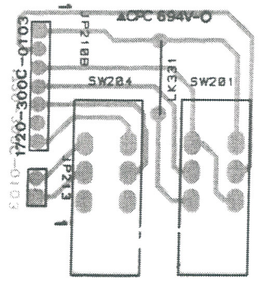
HEADPHONE



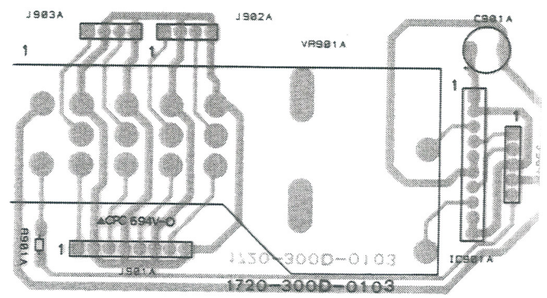
SURROUND/CENTER SWITCH



PUSH-SWITCH

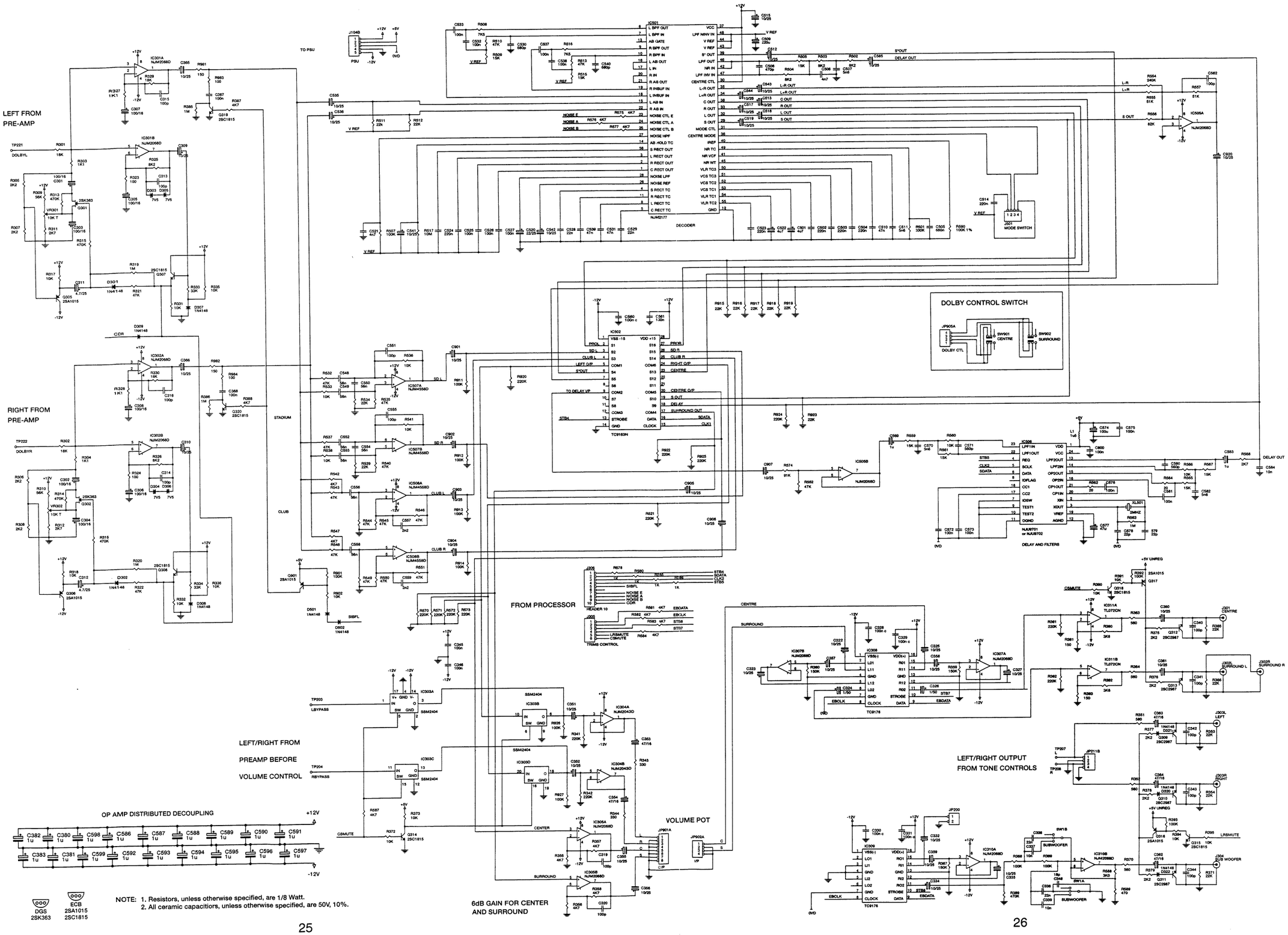


VOLUME



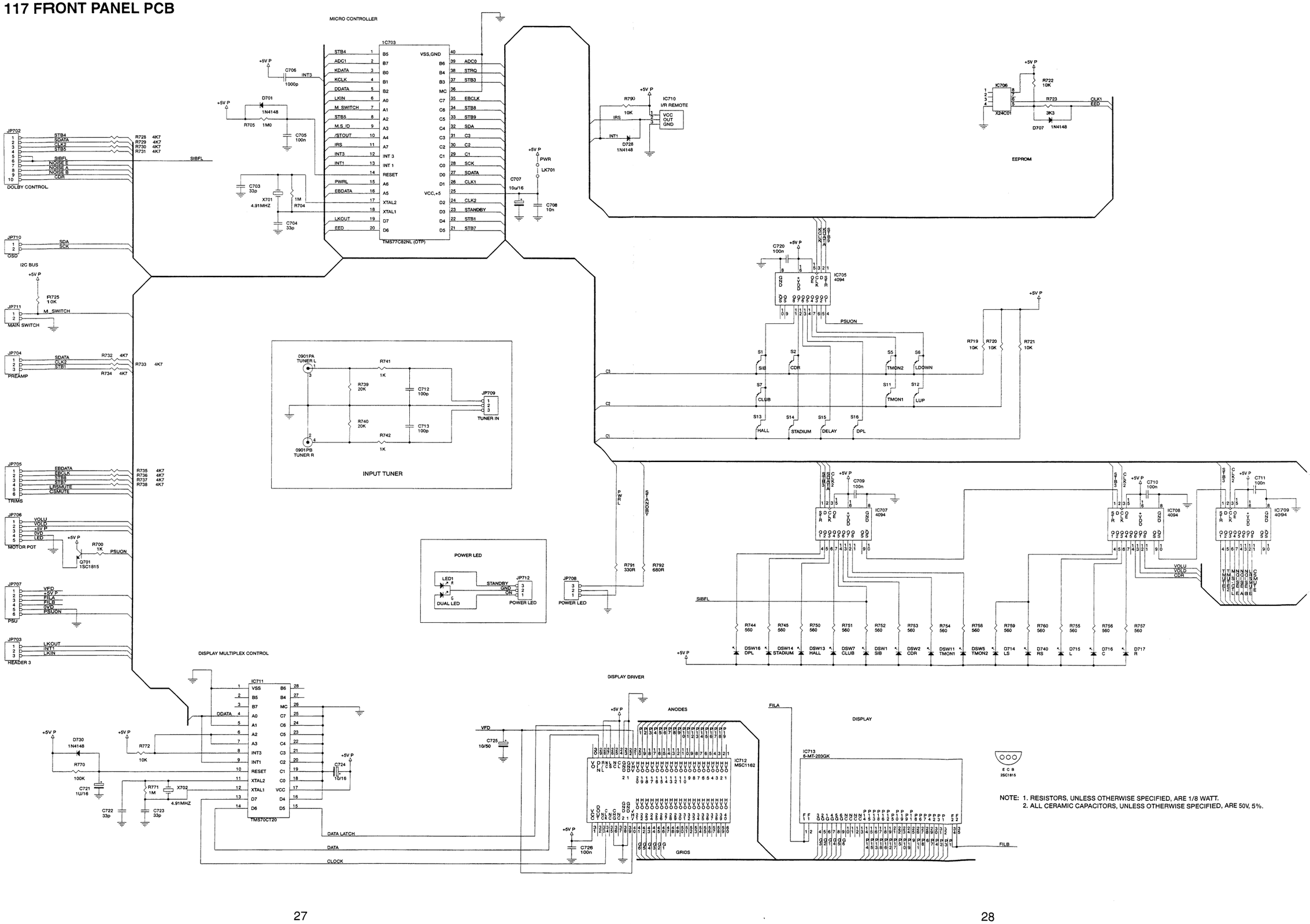
SCHEMATIC DIAGRAM

AUDIO PROCESSOR PCB



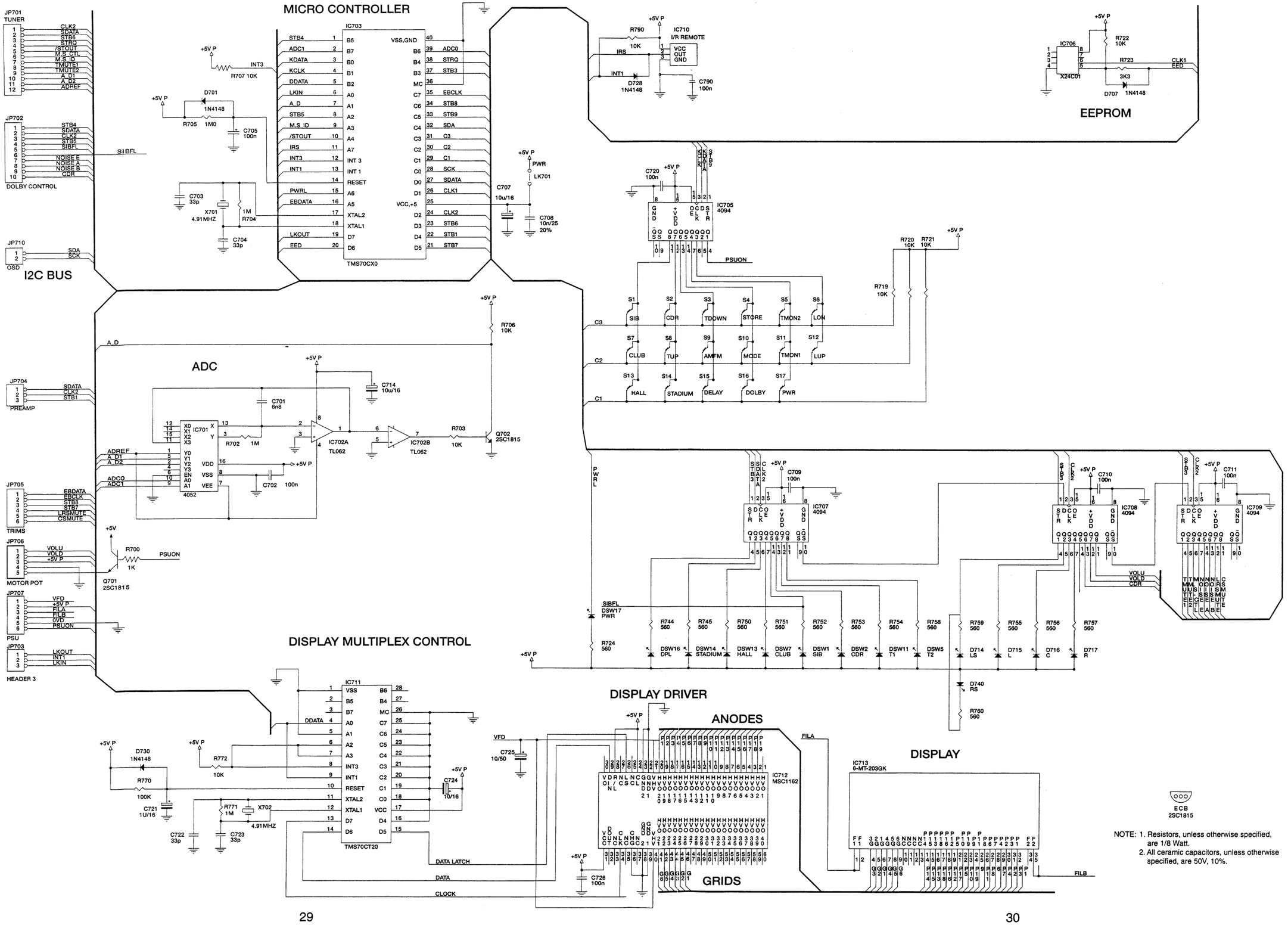
NOTE: 1. Resistors, unless otherwise specified, are 1/8 Watt.
2. All ceramic capacitors, unless otherwise specified, are 50V, 10%.

117 FRONT PANEL PCB



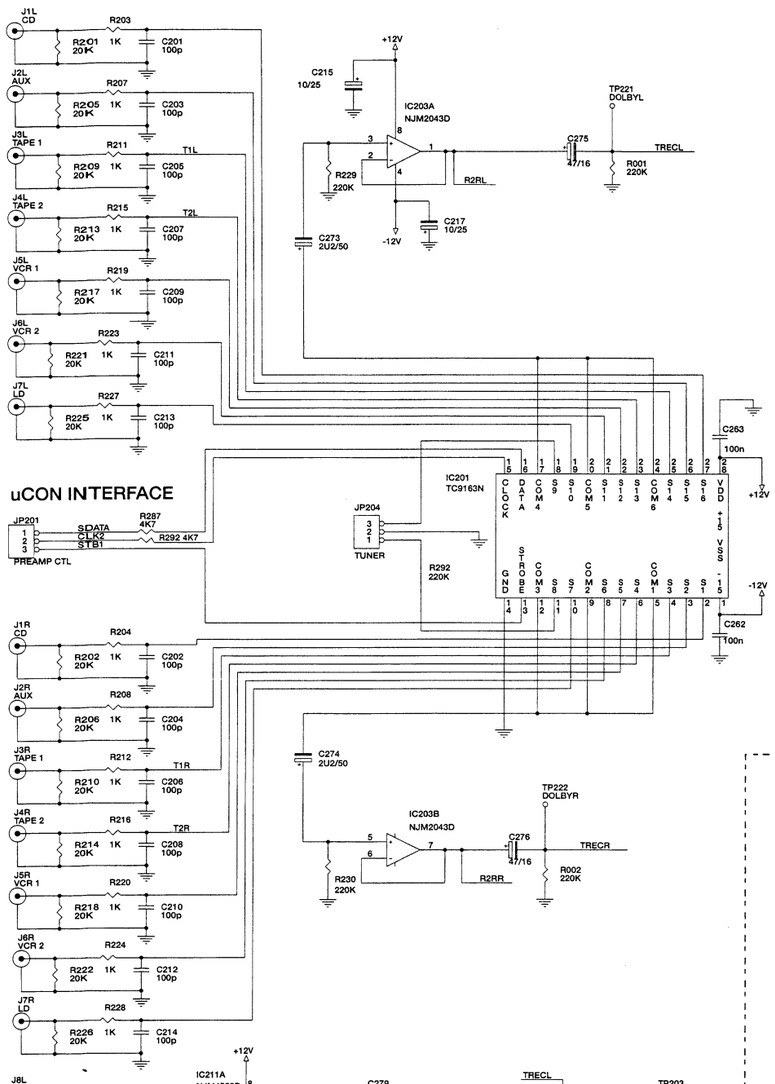
NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 5%.

917 FRONT PANEL PCB

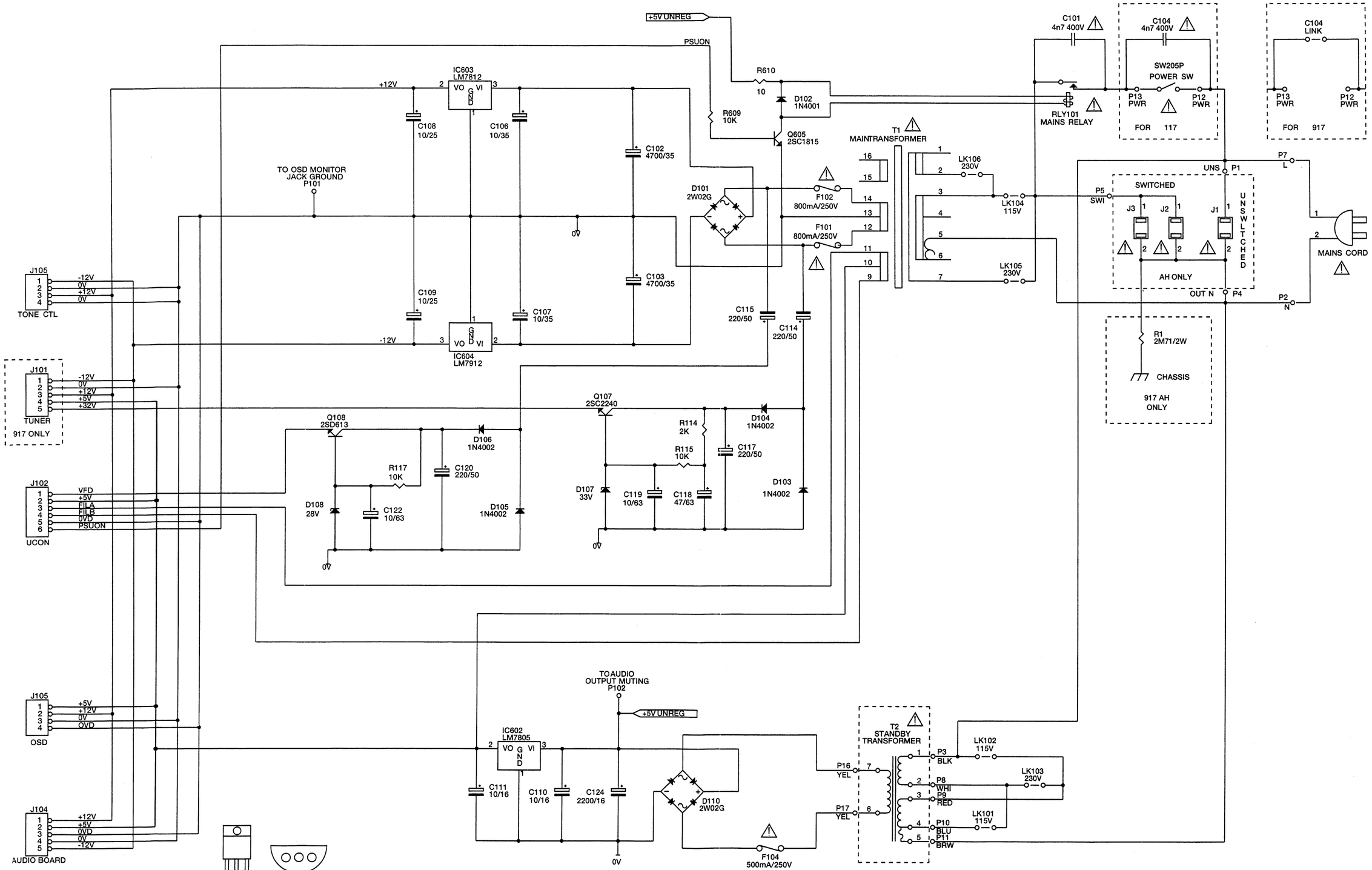


NOTE: 1. Resistors, unless otherwise specified, are 1/8 Watt.
2. All ceramic capacitors, unless otherwise specified, are 50V, 10%.

PREAMP PCB

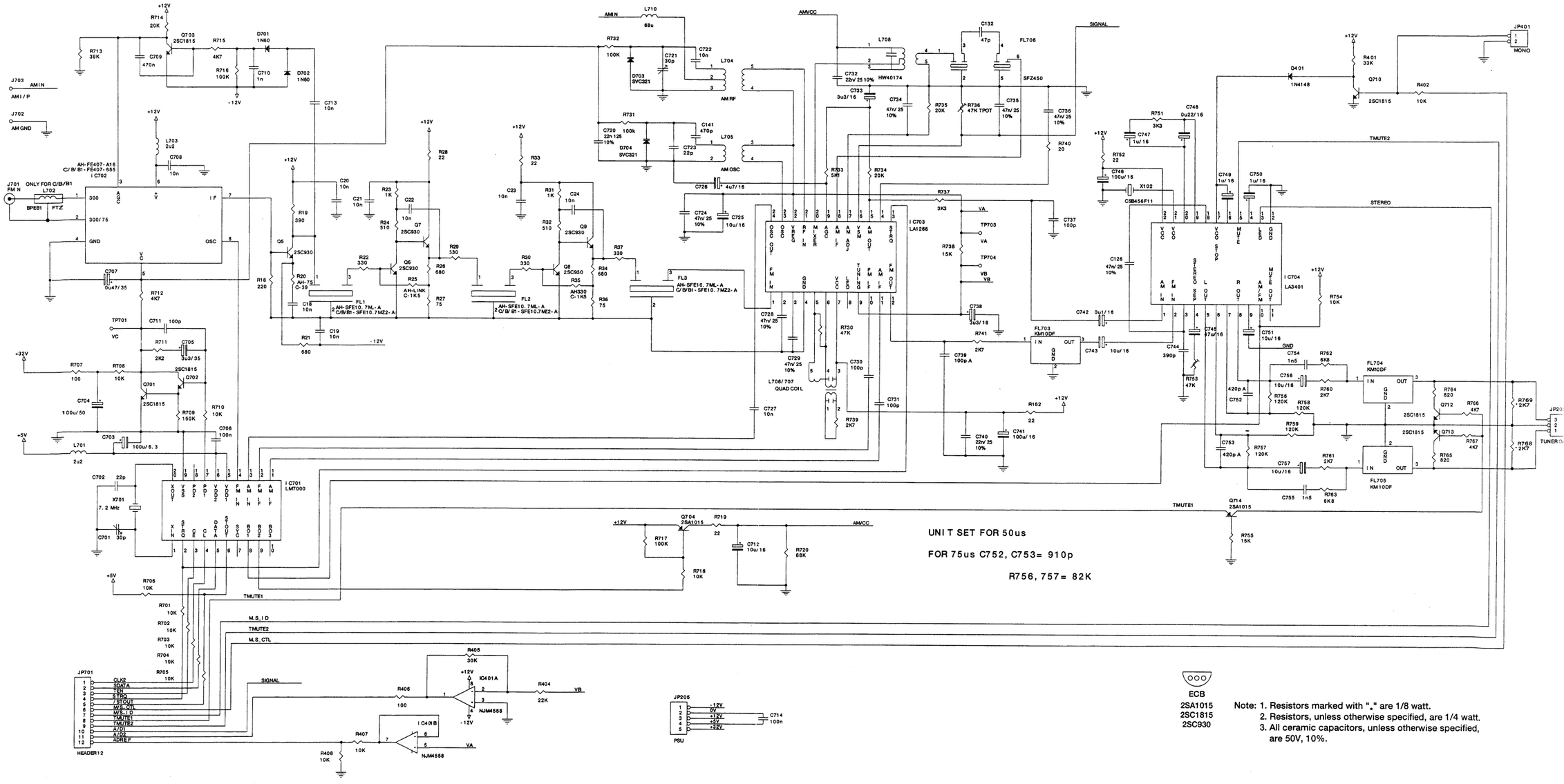

J1L CD
J2L AUX
J3L TAPE 1
J4L TAPE 2
J5L VCR 1
J6L VCR 2
J7L LD
R201 20K
R205 20K
R209 20K
R213 20K
R217 20K
R221 20K
R225 20K
R203
R207
R211
R215
R219
R223
R227
1K
C201 100p
C203 100p
C205 100p
C207 100p
C209 100p
C211 100p
C213 100p
T1L
T2L
uCON INTERFACE
JP201
SDATA
CLK2
STB1
PREAMP CTL
R287 4K7
R292 4K7
IC201 TC9163N
JP204
TUNER
R292 220K
C263 100n
C262 100n
+12V
-12V
J1R CD
J2R AUX
J3R TAPE 1
J4R TAPE 2
J5R VCR 1
J6R VCR 2
J7R LD
R202 20K
R206 20K
R210 20K
R214 20K
R218 20K
R222 20K
R226 20K
R204
R208
R212
R216
R220
R224
R228
C202 100p
C204 100p
C206 100p
C208 100p
C210 100p
C212 100p
C214 100p
T1R
T2R
C274 2U2/50
C215 10/25
IC203A NJM2043D
R229 220K
C217 10/25
C273 2U2/50
TP221 DOLBYL
C275 47/16
R001 220K
TRECL
R2RL
IC203B NJM2043D
R230 220K
C276 47/16
TP222 DOLBYR
R002 220K
TRECR
R2RR
DOLBY PROCESSOR
VOLUME POT
SOUND SPACE
CDR
SIB FILTER
J8L T1L REC
J9L T2L REC
J8R T1R REC
J9R T2R REC
R277 1K
R275 1K
R278 1K
R276 1K
R281 1K
R279 1K
R282 1K
R280 1K
C249 220p
C251 220p
C250 220p
C252 220p
IC211A NJM4558D
IC212B NJM4558D
IC211B NJM4558D
IC212A NJM4558D
R273 220K
R271 220K
R274 220K
R272 220K
C279 10/25
C277 10/25
C280 10/25
C278 10/25
STB1
CLK1
DATA1
TRECR
TRECL
IC220 TC9164N
C254 1/25
C253 1/25
C261 100n
C260 100n
C281 10/25
C283 10/25
C285 220K
C284 10/25
C282 10/25
R283 220K
R286 220K
R284 220K
T1L
T2L
T1R
T2R
TP203 L
TP204 R
J10L R2R L
J10R R2R R
R289 1K
R288 1K
R291 1K
R290 1K
C271 220p
C270 220p
R2RL
R2RR
C287 10/25
R295 220K
C286 10/25
R294 220K
IC221A NJM4558D
IC221B NJM4558D
R297 1K
R296 1K
R299 1K
R298 1K
C289 100p
C288 100p
J11L VCR2
J11R VCR2
BASS EQ
R013 10M
D201 1N4148
Q201 2SK363
C291 47/16
C216 10/25
C219 220n/63
C221 220n/63
R239 1K
IC204A NJM2043D
C225 10/25
R005 1K
R231 1M
R237 120K
C223 100p
R235 47K
R233 4K7
Q203 2SK363
C293 100p
D203 1N4148
R015 10M
C218 10/25
TP205 L
JP214 VOLUME
TP206 R
R003 100K
R004 100K
JP210A
JP210B
SW201 BASS EQ
R014 10M
D202 1N4148
Q202 2SK363
C292 47/16
C220 220n/63
C222 220n/63
R240 1K
IC204B NJM2043D
C226 10/25
R006 1K
R232 1M
R238 120K
C224 100p
R236 47K
R234 4K7
Q204 2SK363
C294 100p
D204 1N4148
R016 10M
HEAD PHONE AMP
+5V +12V
0VD
-12V
J104B
PSU
C239 1/25
C247 220p
JP212B
R263 1K
R265 4K7
C268 10/25
C269 10/25
R243 100
R241 100K
IC207A NJM2043D
R247 15K
C231 47/16
R245 2K7
C235 100/10
VR201A 50K-C
R249 3K9 2%
C227 82n
C230 470n/63
R251 680 2%
VR201B 50K-C
C232 47/16
R246 2K7
C228 82n
C229 470n/63
R250 3K9 2%
R252 680 2%
C295 18n
R253 1K
VR202A 10K-C
C297 100n M
R255 180
VR202B 10K-C
C298 100n M
R256 180
SW202A TONE
SW202B TONE
R259 15K
C237 1/25
R007 3K9
R009 680
R008 3K9
R010 680
R011 220
R012 220
IC208A NJM2043D
R261 47K
C241 1/25
C243 100/10
R269 120 1/2 W
R267 22K
JP203
PHONES
R244 100
R242 100K
IC207B NJM2043D
R248 15K
C236 100/10
C238 1/25
R260 15K
R262 47K
C244 100/10
R270 120 1/2 W
R268 22K
C248 220p
R264 1K
R266 4K7
IC208B NJM2043D
R349 2K
R350 2K
JP300
SUBWOOFER
CAPS ARE SINGLE PLATE CERAMIC ONLY FOR B, B1, C.
JP1
HEADPHONES
C246 2N2
C245 2N2
SK1
PHONEJACK STEREO
HEADPHONES PCB
NAD LINK
R711 1K8
+5V
Q703 2SA1015
R712 100
R709 100
J701L OUT
J701R IN
R713 10K
D703 1N4148
JP720
NAD LINK
OPEN LK702
LK703 LINK
R710 10K
R790 100
R708 4K7
R707 4K7
R715 4K7
R716 4K7
Q705 2SC1815
Q704 2SA1015
D702 1N4148
R717 1K8
GND BACK TO PSU STAR
J106
C300 100n
IC109 LM7805
VI
VO
GND
C333 10/25
C347 10/25
PSU
OSD
OSD +5V SUPPLY
DGS 2SK363
ECB 2SA1015
VR203 10K
JP211A
LEFT/RIGHT
OUTPUT
MUTES
MONO
TUNER MONO
NOTE: 1. Resistors, unless otherwise specified, are 1/8 Watt.
2. All ceramic capacitors, unless otherwise specified, are 50V, 10%.

PSU PCB



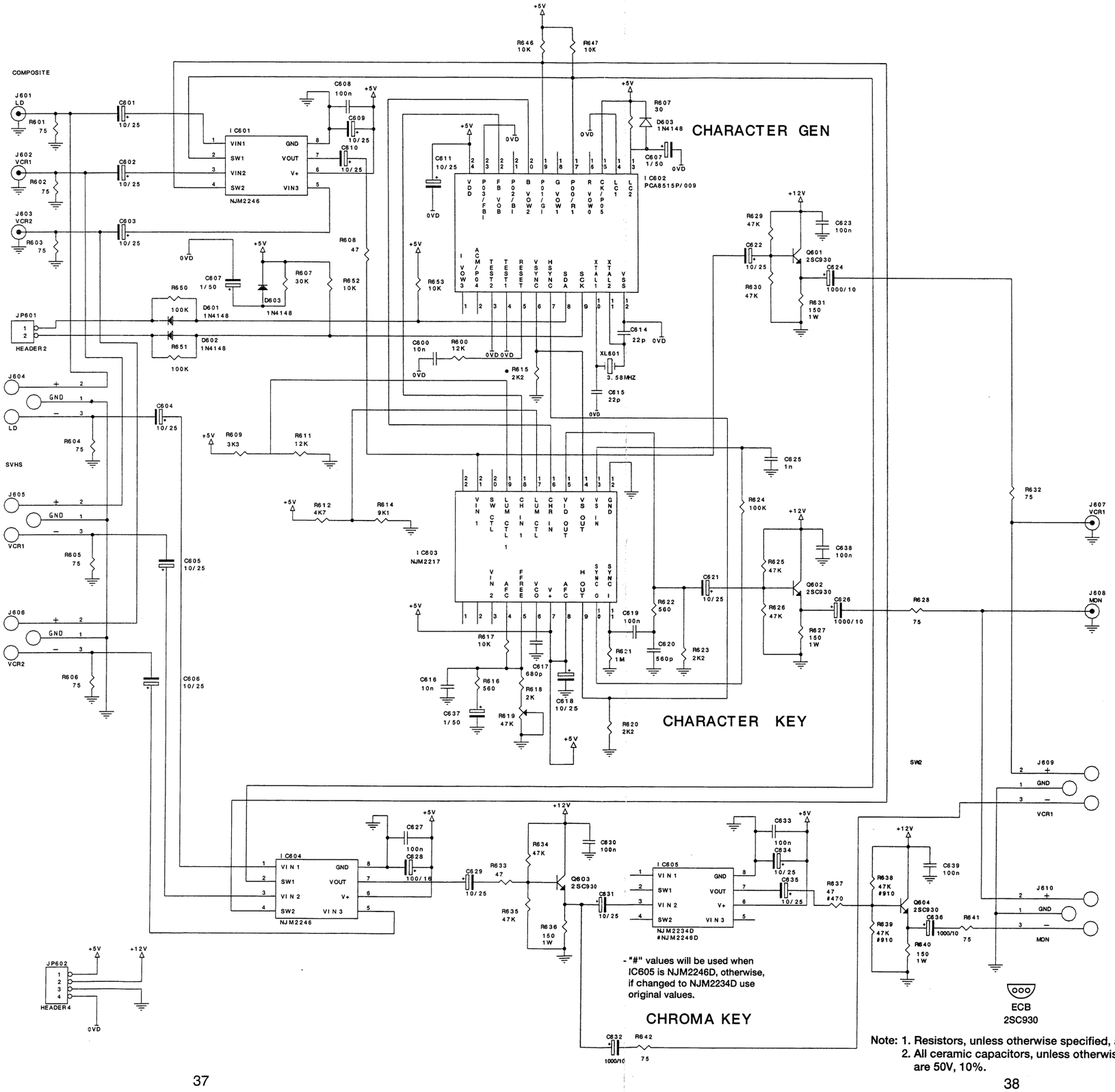
Note: 1. Resistors, unless otherwise specified, are 1/8 Watt.
2. Marked with "⚠" are safety critical part.

917 TUNER PCB



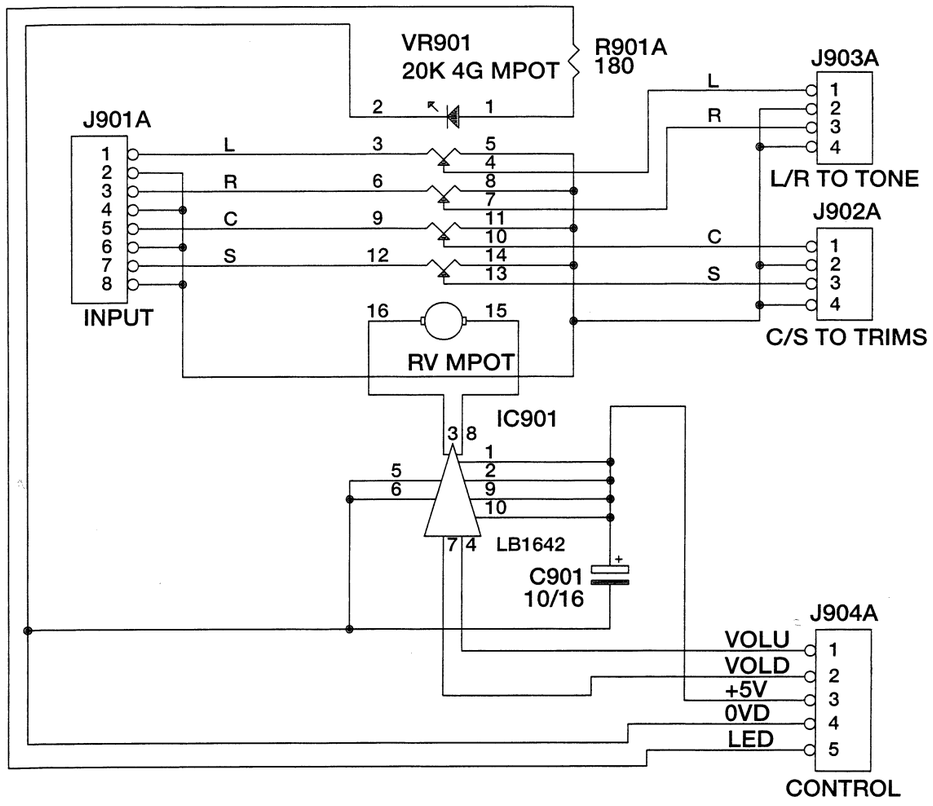
Note: 1. Resistors marked with "," are 1/8 watt.
2. Resistors, unless otherwise specified, are 1/4 watt.
3. All ceramic capacitors, unless otherwise specified, are 50V, 10%.

VIDEO PCB



Note: 1. Resistors, unless otherwise specified, are 1/8 Watt.
2. All ceramic capacitors, unless otherwise specified, are 50V, 10%.

MOTOR POT PCB

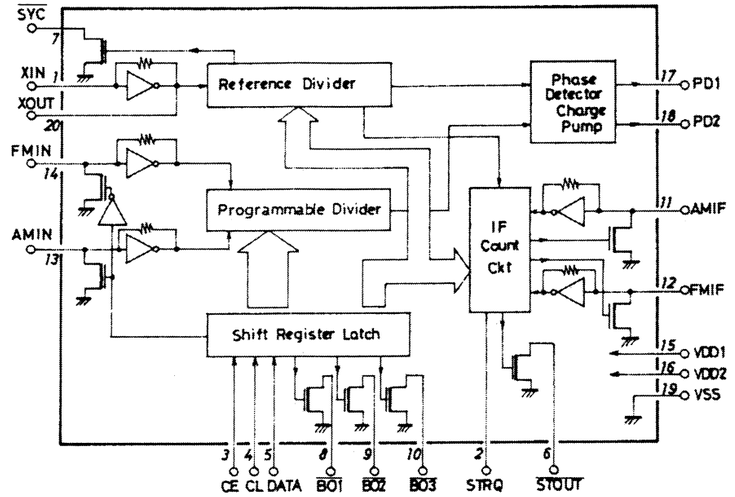


NOTE: Resistor, unless otherwise specified, is1/8 Watt.

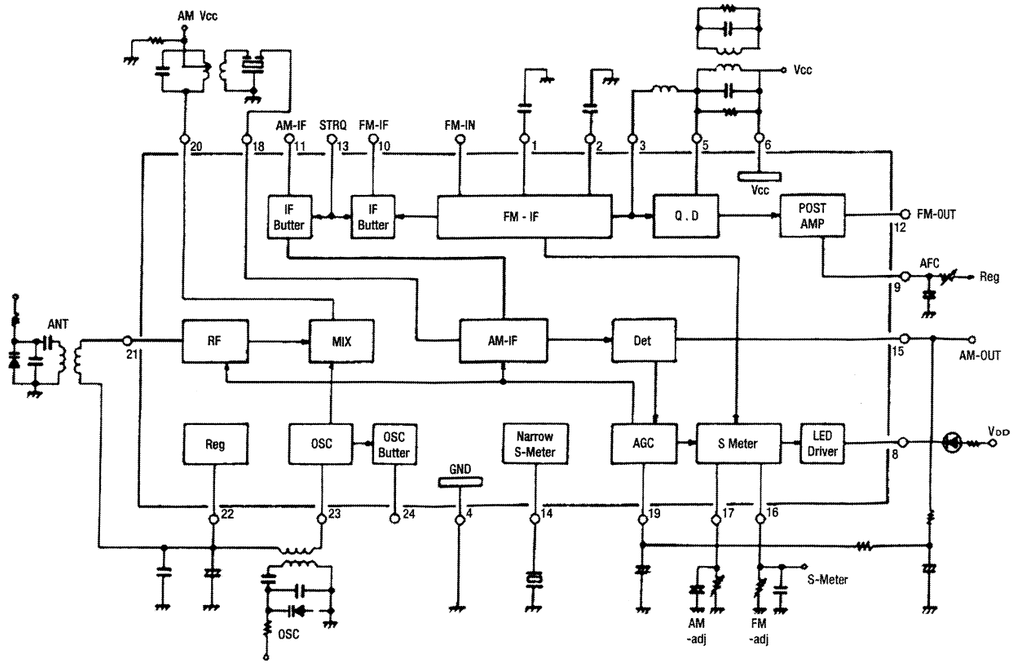
IC BLOCK DIAGRAM

TUNER (For 917 only)

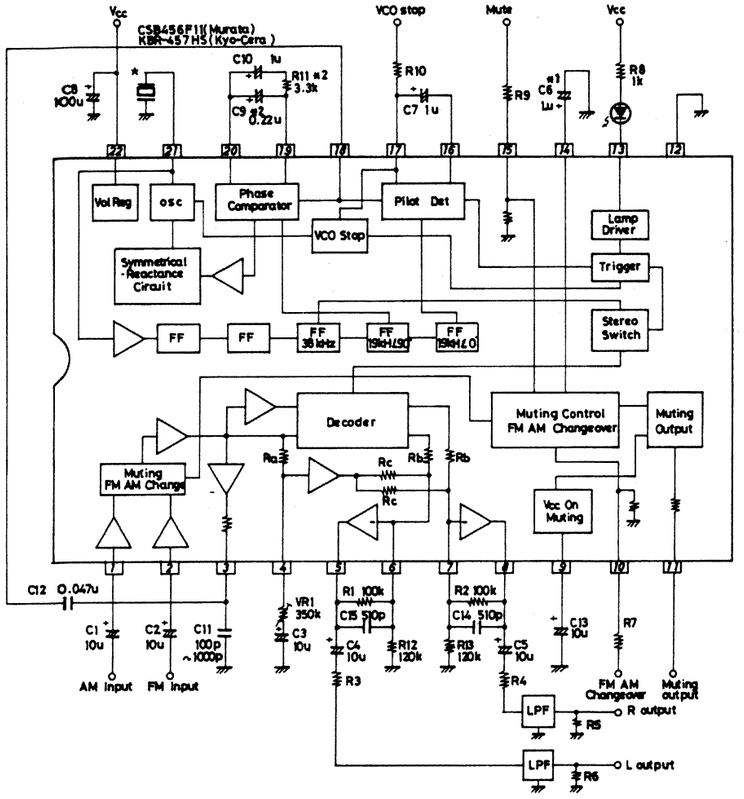
IC701: LM7000 (BLOCK DIAGRAM)



IC703: LA1266 (BLOCK DIAGRAM)

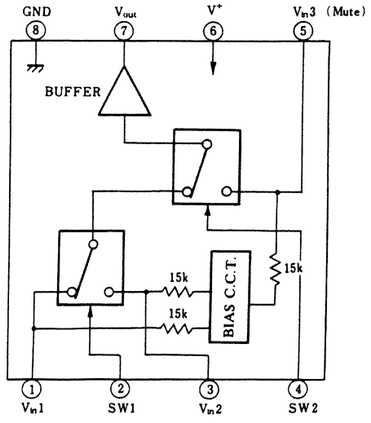


IC704: LA3401 (BLOCK DIAGRAM)

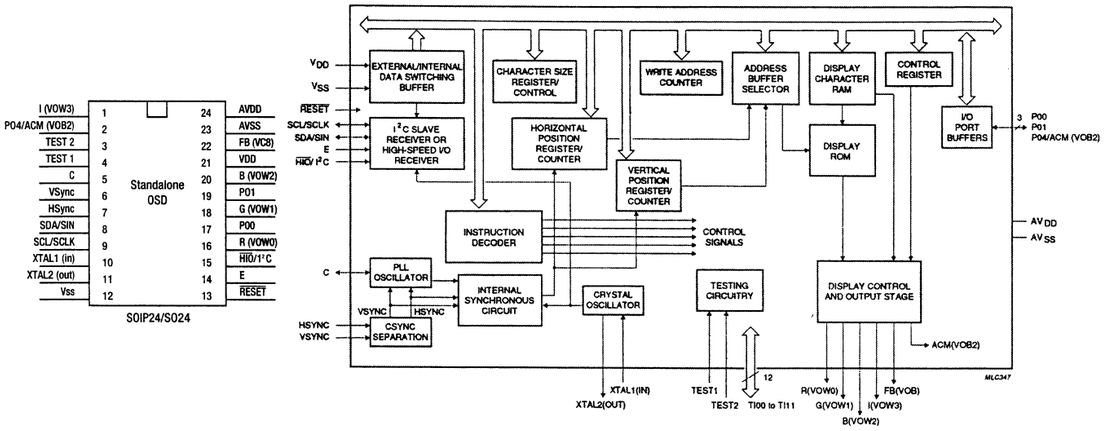


VIDEO BOARD

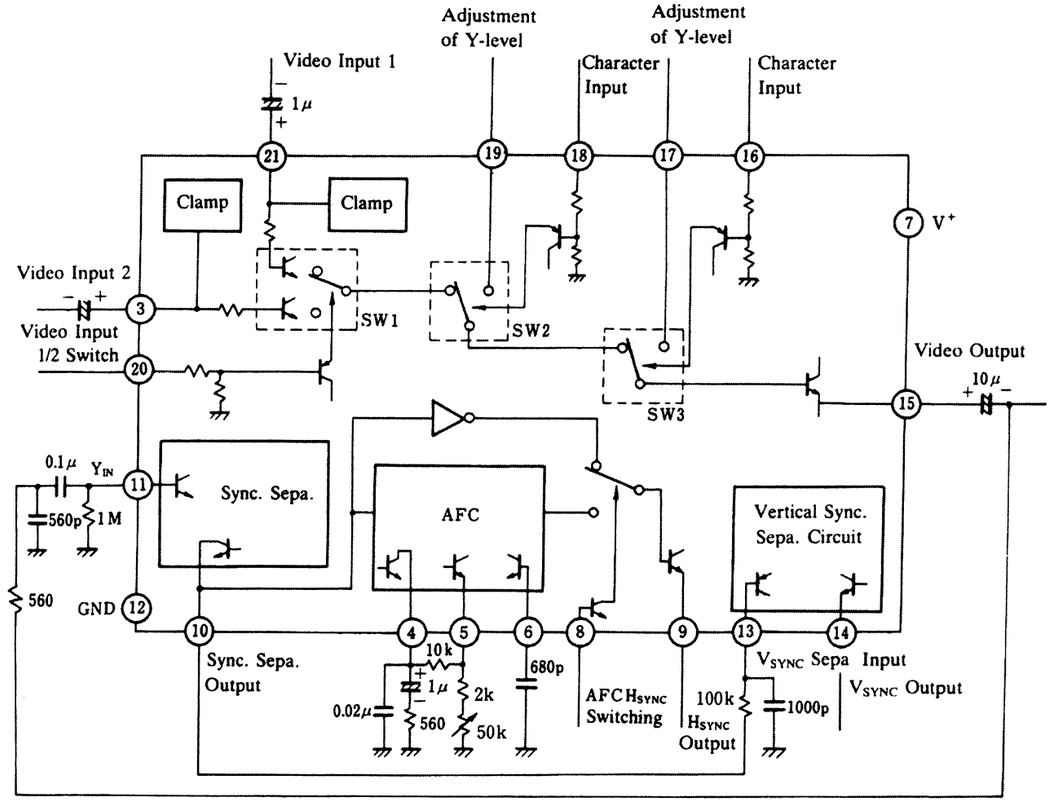
IC601/604: NJM2246
IC605: NJM2234D



IC602: PCA8515 & BLOCK DIAGRAM

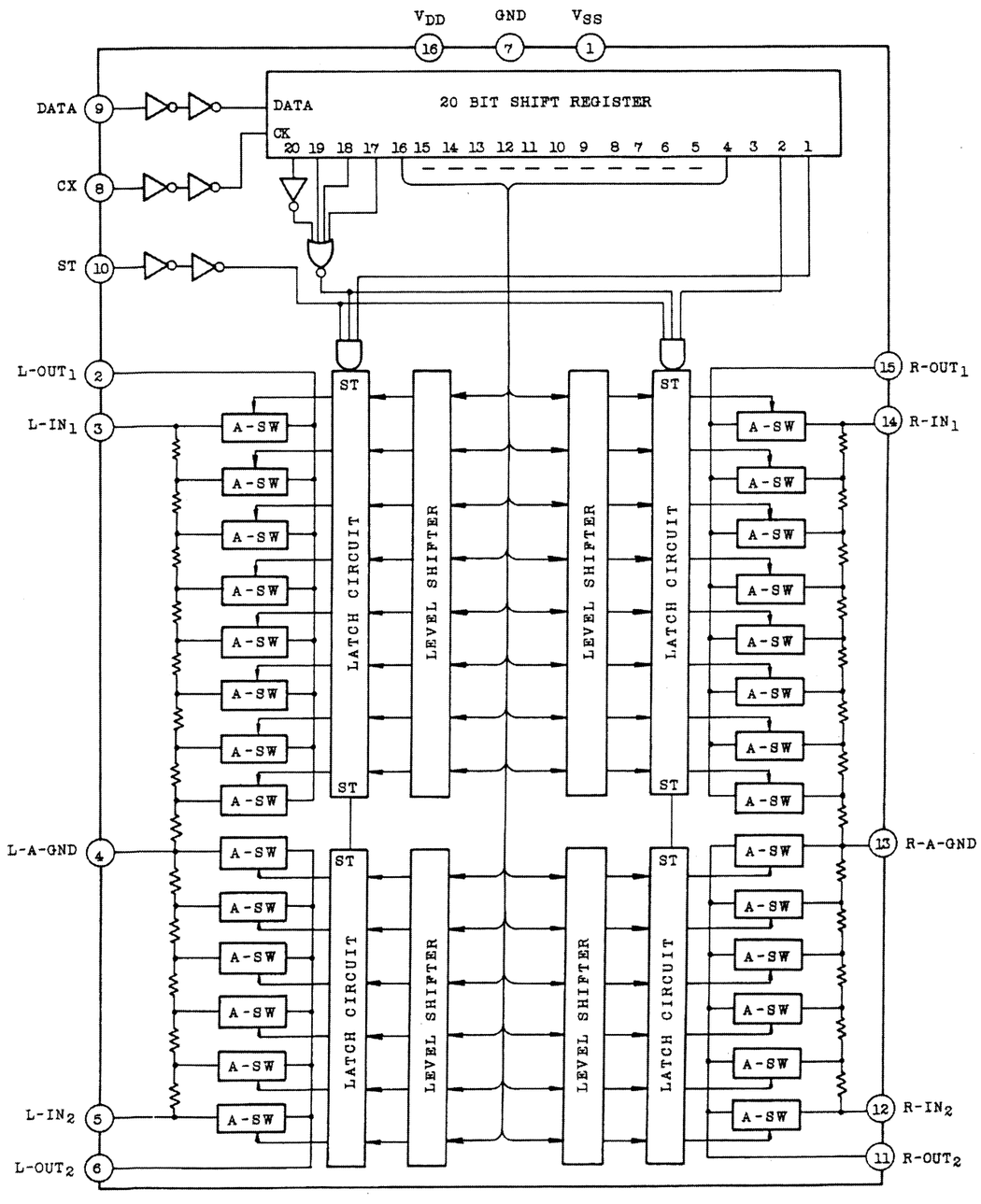


IC603: NJM2217 (BLOCK DIAGRAM)

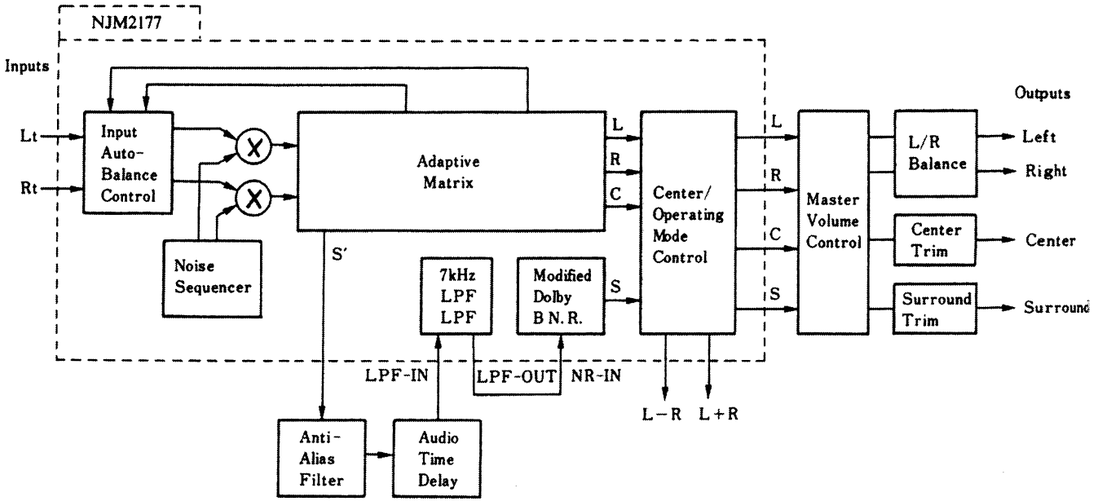


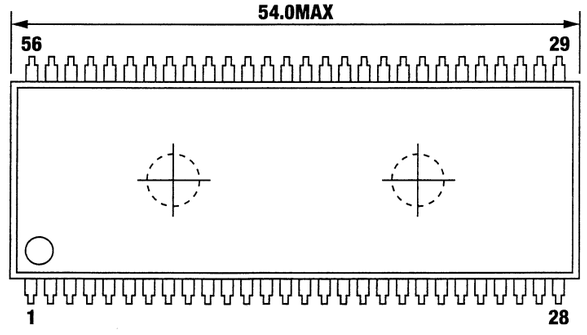
AP BOARD

IC308/309: TC 9176 ELECTRONIC VOLUME (BLOCK DIAGRAM)



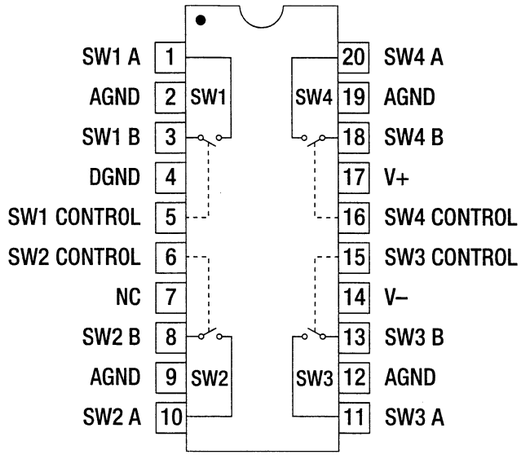
IC501: NJM2177 (DOLBY PROLOGIC)



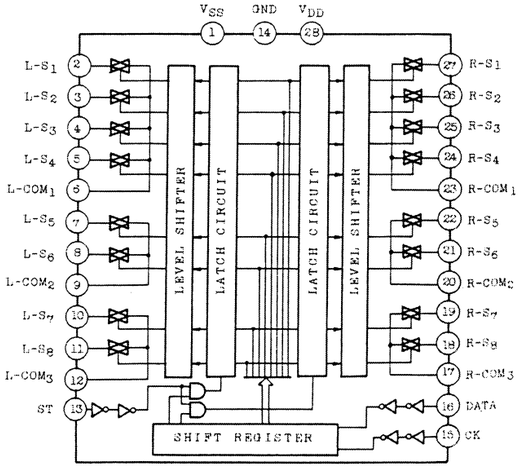


PIN No.	Pin Name	PIN No.	Pin Name	PIN No.	Pin Name	PIN No.	Pin Name
1.	C-RECT-OUT	15.	L-AB-IN	29.	S-OUT	43.	VREF
2.	R-RECT-OUT	16.	L-AB-OUT	30.	CENTER-CNT	44.	VREF
3.	L-RECT-OUT	17.	L-IN	31.	MODE-CNT	45.	NR-WT
4.	S-RECT-TC	18.	L-INBUF-OUT	32.	L-OUT	46.	LPF-OUT
5.	C-RECT-TC	19.	R-INBUF-OUT	33.	R-OUT	47.	LPF-INV-IN
6.	L-BPF-OUT	20.	R-IN	34.	L+R-OUT	48.	LPF-NINV-IN
7.	L-BPF-IN	21.	R-AB-OUT	35.	L-R-OUT	49.	NR-TC
8.	L-RECT-TC	22.	R-AB-IN	36.	CENTER-MODE	50.	VLR-TC3
9.	R-BPF-OUT	23.	NOISE-CNT-E	37.	V^+	51.	VCS-TC3
10.	R-BPF-IN	24.	NOISE-CNT-A	38.	C-OUT	52.	VCS-TC2
11.	R-RECT-TC	25.	NOISE-CNT-B	39.	S'-OUT	53.	VCS-TC1
12.	GND	26.	NOISE-REF	40.	IREF	54.	VLR-TC1
13.	AB-GATE	27.	NOISE-HPF	41.	NR-VCF	55.	VLR-TC2
14.	AB-HOLD-TC	28.	NOISE-LPF	42.	NR-IN	56.	S-RECT-OUT

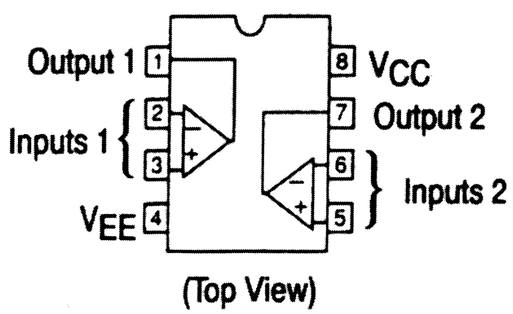
IC303: SSM2404 (QUAD ANALOG SWITCH)



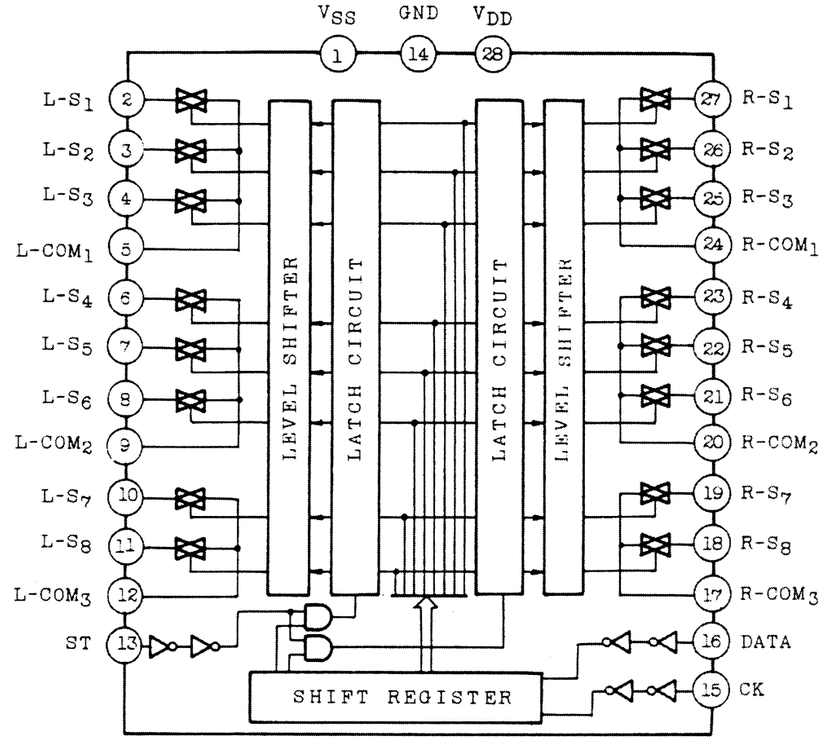
IC220: TC9164N



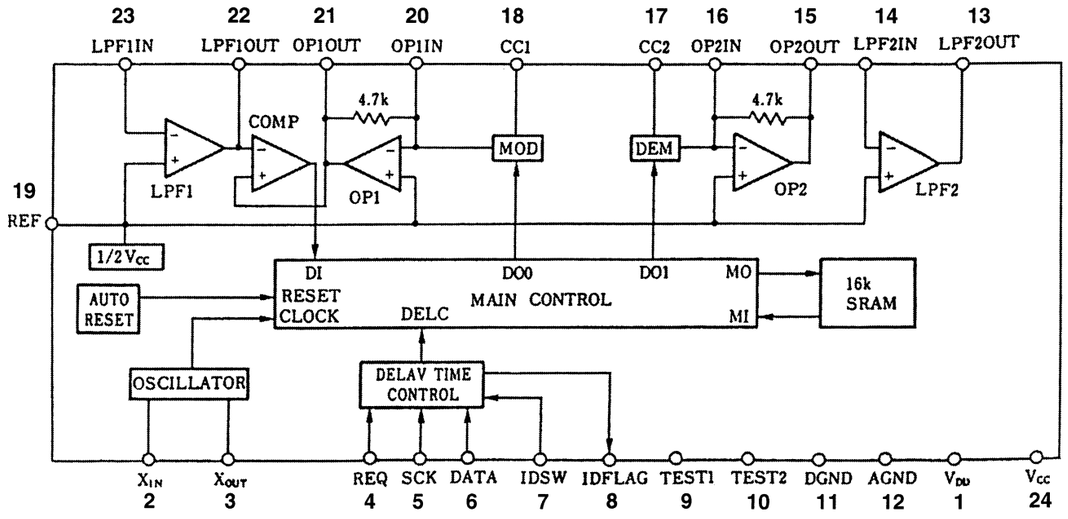
IC221: NJM4558, IC301/302: NJM2068D, IC304: NJM2043D, IC311: TL072CN, IC702: TL062 (ON PANEL BOARD)



IC502: TC9163N

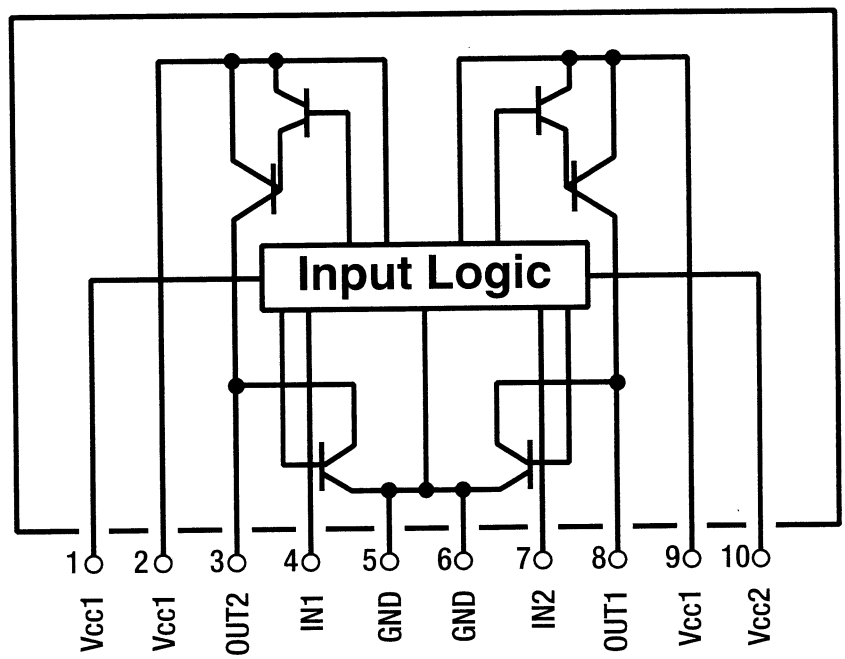


IC506: NJU 9701 (DELAY AND FILTER)



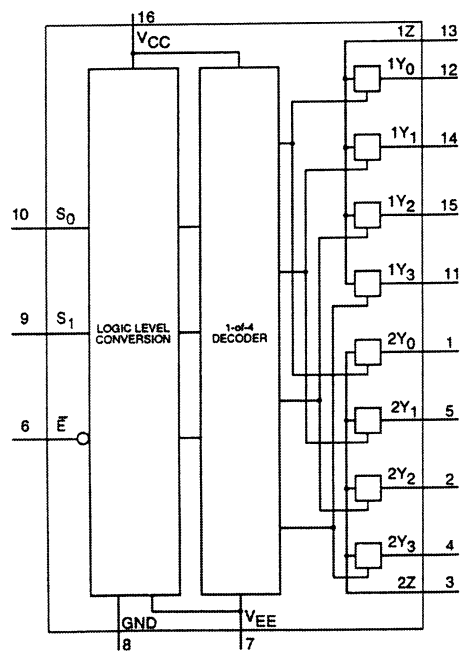
MOTOR POT BOARD

IC901: LB1642 (EQUIVALENT CIRCUIT BLOCK DIAGRAM)

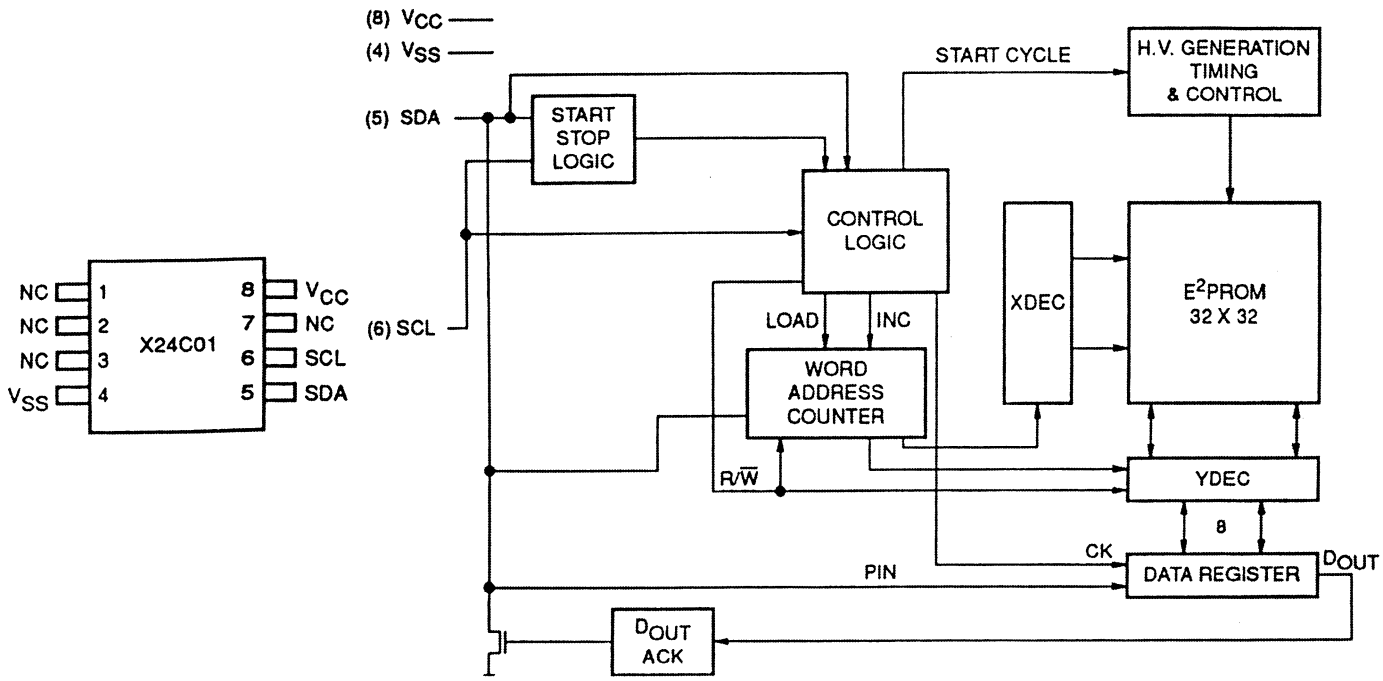


PANEL BOARD

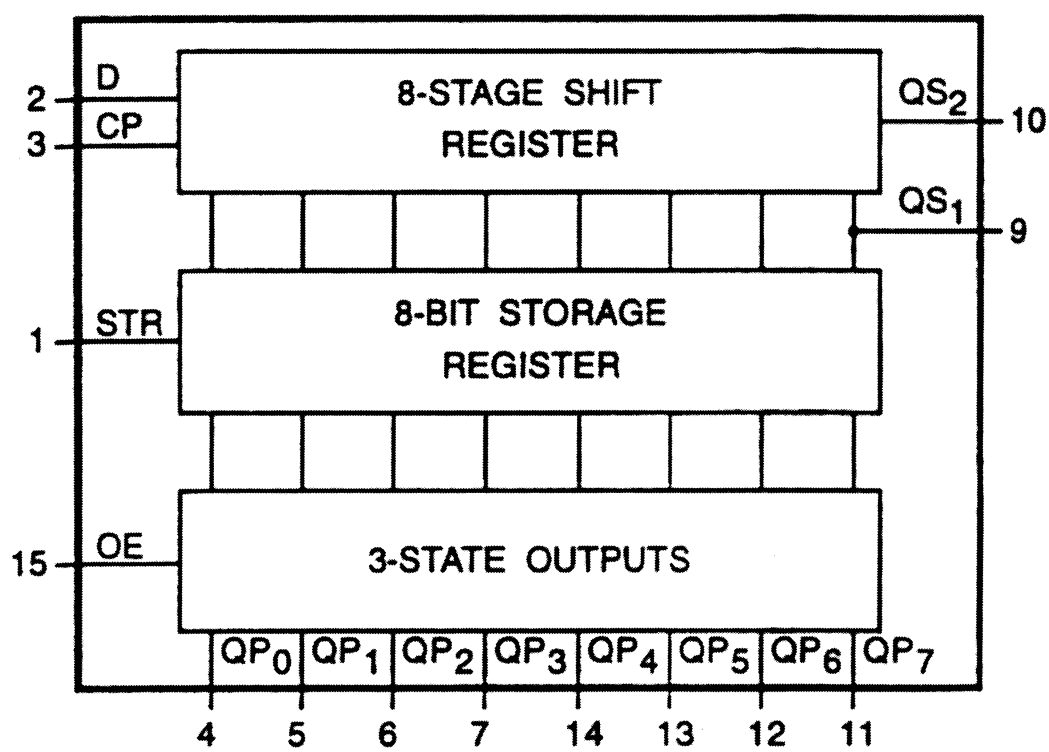
IC701: MC14052BCP



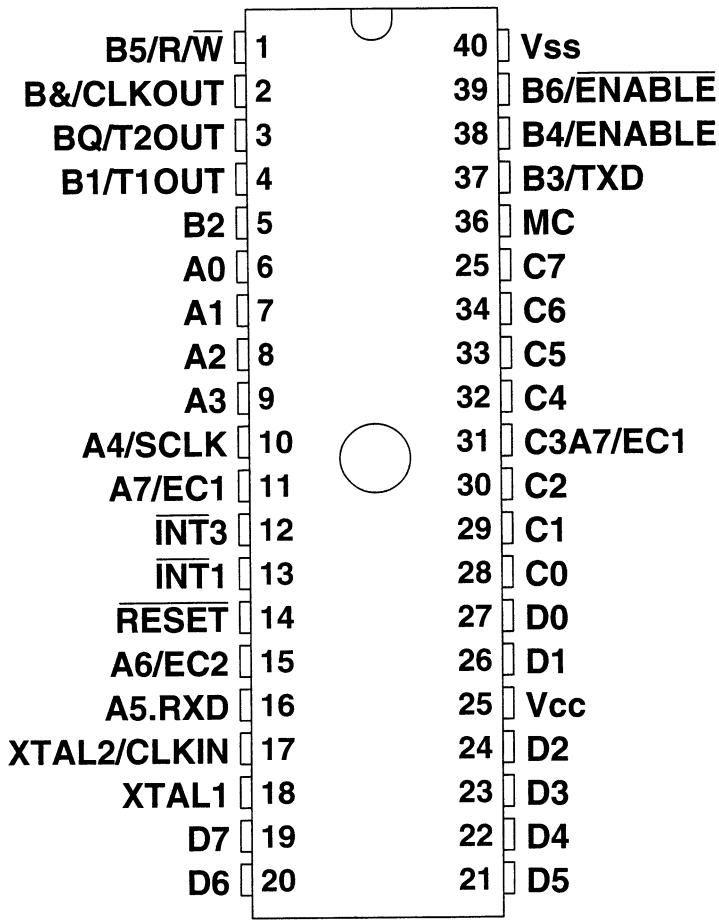
IC706: X24C01P



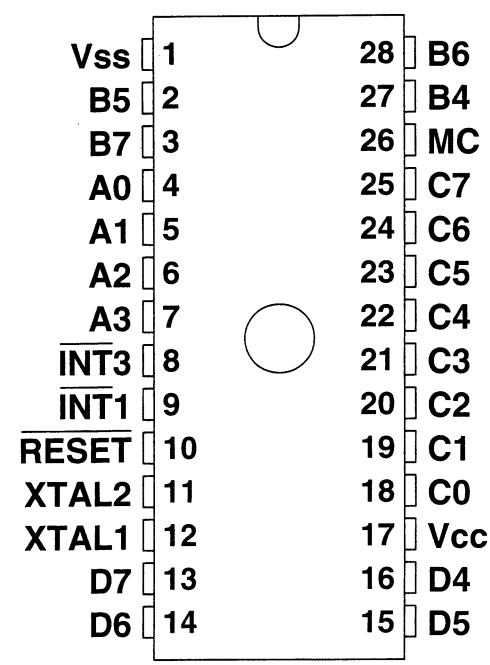
IC705: MC14094BCP



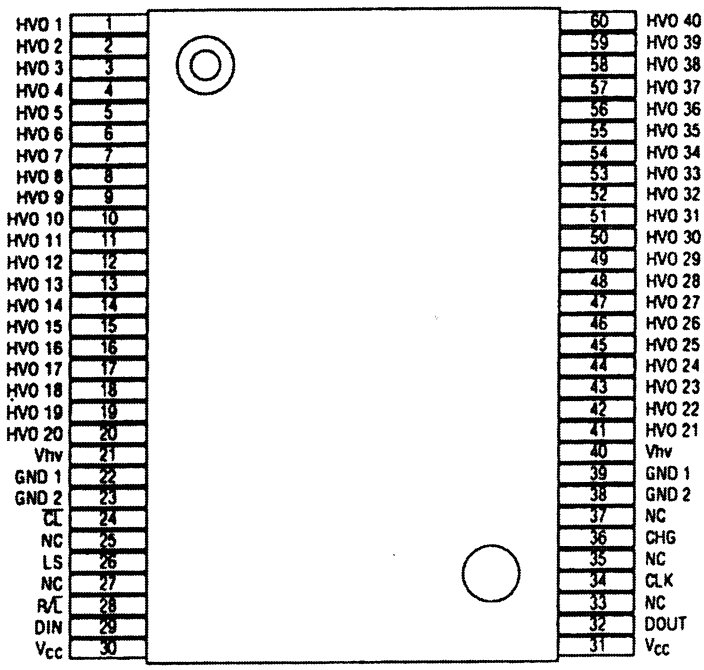
IC703: TMS70CT82



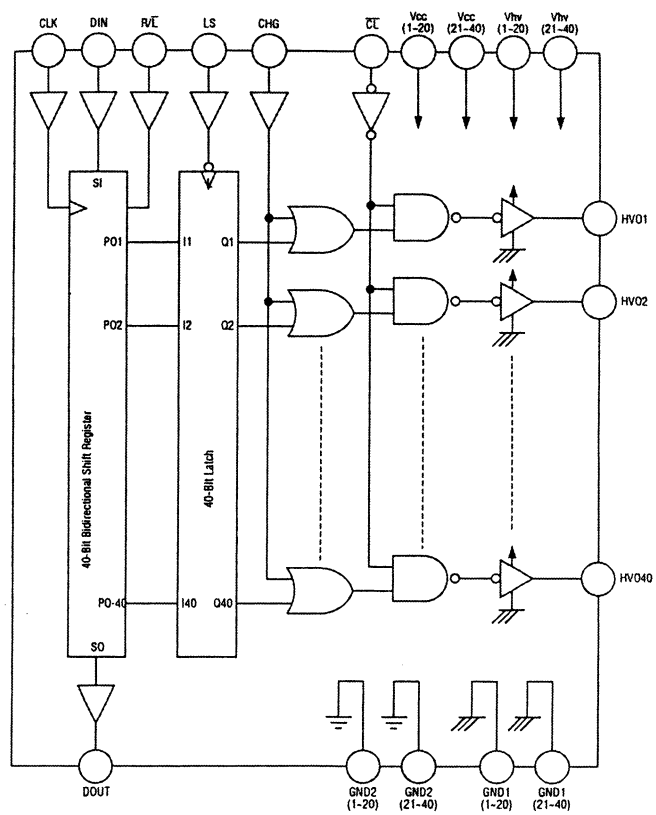
IC711: TMS70CT20



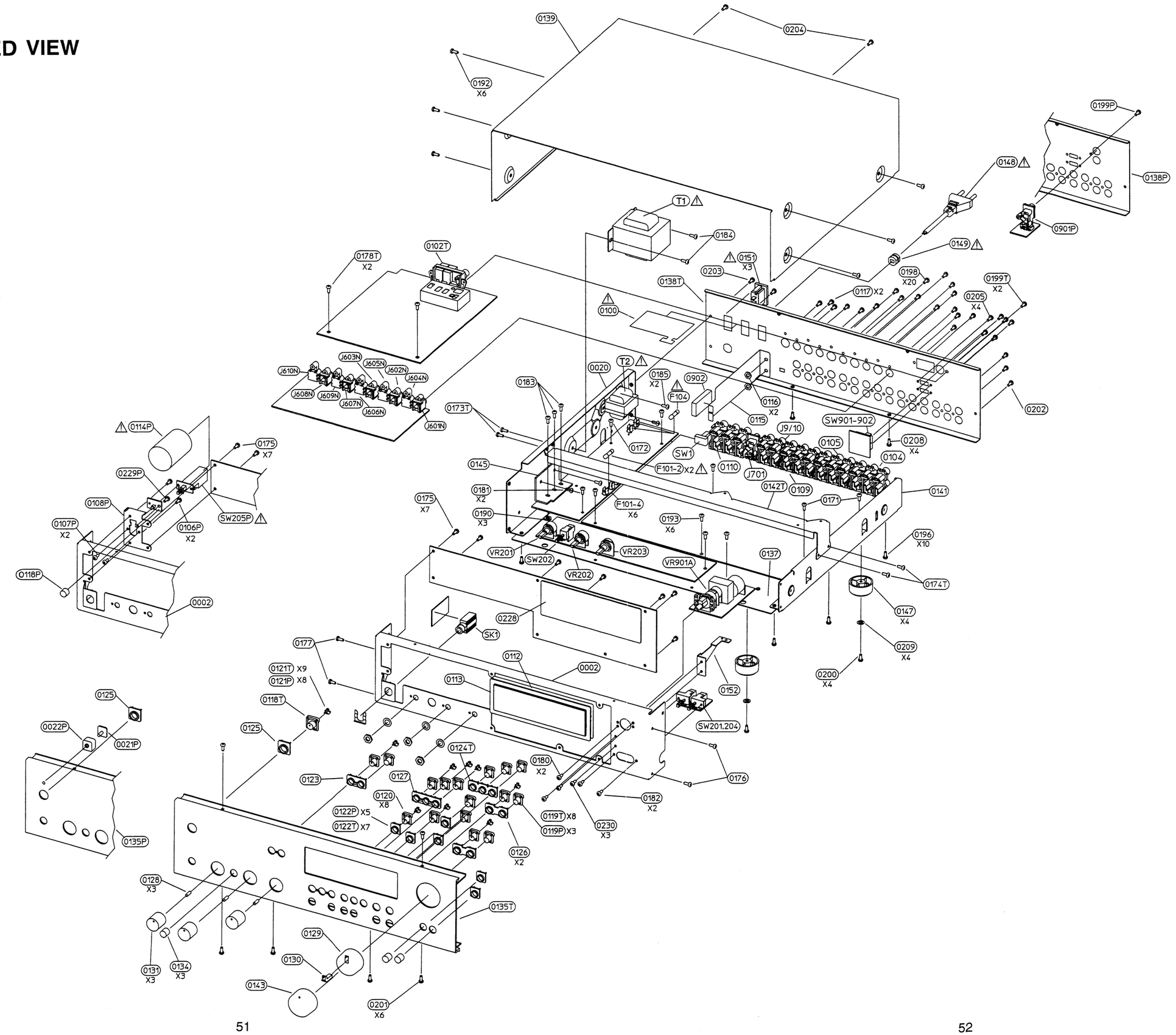
IC712: TMS1162



IC712: TMS1162 (BLOCK DIAGRAM)



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Item	Part No	Description	Qty
FH101-4	4131-9131-0	FUSE HOLDER 6.5MM PICTH RECT	6
0002	N14023390-2	SUBFACIA	1
0020	N14023430-1	LEFT SIDE PANEL	1
0021P	N37145706-0	LED LENS	1
0022P	4152-1701-0	LED BEZEL	1
0100*AH ⚠	N41520571-0	AC OUTLET COVER PLATE AH VERSION	1
0102T*AH	N21070641-0	ANTENNA TERMINAL F-TYPE	1
0102T*B,C	N21070681-0	ANTENNA TERMINAL DIN-TYPE	1
0104-0105	N21038506-2	6P RCA JACK R/W NI	2
0106P	2904-3006-4000	MACHINE SCREW 3X6MM	2
0107P	2904-3006-4000	MACHINE SCREW 3X6MM	2
0108P	4132-2641-0	POWER SWITCH BRACKET	1
0109-0110	N21038506-2	6P RCA JACK R/W NI	2
0112	N37145206-0	FILTER 156X53X0.5MM	1
0113	N37143426-0	DISPLAY LENS	1
0114P ⚠	1660-0620-0	SHRINKABLE TUBE	1
0115	1454-1751-0	SHIELD PLATE 80MM HIGH	1
0116	2836-3005-0	HEX NUT M3X0.5P	2
0117	2904-3006-3000	MACHINE SCREW 3X6MM (BLK)	2
0118P	N2437510B-0	DIA 9.5 GLOSS POWER BUTTON	1
0118T	N2437720B-0	SINGLE LENS POWER BUTTON	1
0119P	N24377301-0	SINGLE BUTTON (BLACK)	3
0119T	N24377301-0	SINGLE BUTTON (BLACK)	8
0120	N24377401-0	SINGLE LENS BUTTON	8
0121P	N37143306-0	BUTTON LENS (CLEAR)	8
0121T	N37143306-0	BUTTON LENS (CLEAR)	9
0122P	N41520131-0	SINGLE BEZEL	5
0122T	N41520131-0	SINGLE BEZEL	7
0123	N41520141-0	DUAL LINKED BEZEL	1
0124T	N41520151-0	TRIPLE BEZEL	1
0125	N41520161-0	POWER BEZEL	1
0126	N41520171-0	DUAL BEZEL	2
0127	N41520181-0	TRIPLE LINKED BEZEL	1
0128	N41520041-0	KNOB POINTER	3
0129	N24377601-0	35MM KNOB CORE	1
0130	N24377706-0	35MM KNOB LENS	1
0131	N24375701-1	KNOB 18.5MM BASS/TREBLE/BALANCE	3
0134	N24376001-0	LONG BUTTON 8.0MM (INPUT SELECT)	3
0135P	N14024021-0	FASCIA	1
0135T	N14620701-0	FASCIA	1
0137	N14023400-0	BASE	1
0138P*AH	N14023410-0	REAR PANEL AH VERSION	1
0138P*C	1402-4041-1	REAR PANEL C VERSION	1
0138T*AH	N14023411-1	REAR PANEL AH VERSION	1
0138T*B,C	1402-3481-1	REAR PANEL B,C VERSION	1

Item	Part No	Description	Qty
0139	N14023420-0	TOP COVER	1
0141	N14023440-0	RIGHT SIDE PANEL	1
0142T	N14023450-0	STRAP	1
0143	N14023460-0	35MM KNOB SKIN	1
0145	N54000891-0	HEATSINK	1
0147	N41519371-1	RUBBER FOOT	4
0148*AH ⚠	N70093100-1	AC CORD AH VERSION	1
0148*C ⚠	N70093110-0	AC CORD C VERSION	1
0148T*B ⚠	N70095110-1	AC CORD B VERSION	1
0149 ⚠	N41519461-0	STRAIN RELIEF BUSHING	3
0151*AH ⚠	N21035802-0	AC OUTLET 125V 15A UL AH VERSION	1
0152	N41520641-0	VR BRACKET	1
0171	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	2
0172	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	1
0173T	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	2
0174T	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	2
0175	2904-3006-4000	MACHINE SCREW 3X6MM	7
0176	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	2
0177	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	2
0178T	2954-3008-0000	TAPPING SCREW 3X8MM B-TITE YEL	2
0180	2954-3006-0000	TAPPING SCREW 3X6MM B-TITE YEL	2
0181	2954-3006-0000	TAPPING SCREW 3X6MM B-TITE YEL	2
0182	2904-3008-4000	MACHINE SCREW 3X8MM	2
0183	2904-3012-4000	MACHINE SCREW 3X12MM	3
0184	2900-4006-3010	SCREW M4X0.5X6MM W/FLAT WASHER	2
0185	2900-3006-4000	MACHINE SCREW 3X6MM	2
0190	2836-3005-0	HEX NUT M3X0.5P	3
0192	2900-4006-3010	SCREW M4X0.5X6MM W/FLAT WASHER	6
0193	2900-3014-3000	MACHINE SCREW 3X14MM (BLK.ZN)	6
0196	2954-3006-3000	TAPPING SCREW 3X6MM B-TITE (BLK.ZN)	10
0198	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	20
0199P	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	1
0199T	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	2
0200	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	4
0201	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	6
0202	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	1
0203	2954-3006-3000	TAPPING SCREW 3X6MM B-TITE (BLK.ZN)	2
0204	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	2
0205	2900-2604-3000	MACHINE SCREW 2.6X4MM (BLK.ZN)	4
0208	2954-3008-3000	TAPPING SCREW 3X8MM B-TITE B	4
0209	2842-3367-0	METAL WASHER ID=3.3 OD=6.7	4
0228	N24600990-0	DISPLAY PANEL	1
0229P	2954-3006-0000	TAPPING SCREW 3X6MM B-TITE (YEL.ZN)	1
0230	2904-3006-4000	MACHINE SCREW 3X6MM NICKEL	3
0901P	2113-0700-0	RCA JACK R/W NI-PLATED	1

Item	Part No	Description	Qty
0902	4152-0561-0	SHIELD PLATE CUSHION	1
F101-2*AH ⚠	5120-0010-0	FUSE 250V 800MA TIME LAG UL/CSA	2
F104*AH ⚠	N51005010-1A	FUSE 250V 500MA SLOW BLOW UL/CSA	1
F101-2T*B,C ⚠	5120-0011-0	FUSE 250V 800MA TIME LAG LBC VDE/SEMKO	2
F101-2P*C ⚠	5120-0011-0	FUSE 250V 800MA TIME LAG LBC VDE/SEMKO	2
F104T*B,C&P*C ⚠	N51005010-1B	FUSE 250V 500MA SLOW BLOW LBC VDE/SEMKO	1
T1 ⚠	N18062104-0	TRANSFORMER MAIN 614C	1
T2 ⚠	N18062096-0	TRANSFORMER EI35 115/230VDC 160MA	1
J601N-J603N	21038201-0	1P RCA SOCKET,YELLOW	3
J604N-J606N	21038301-0	1P S-VHS SOCKET	3
J607N-J608N	21038201-0	1P RCA SOCKET,YELLOW	2
J609N-J610N	21038301-0	1P S-VHS SOCKET	2
J701	N21039102-0	2P RCA JACK ORG	1
J9/10	N21037604-2	4P RCA JACK R/W NI	1
SK1	N21038401-0	6MM PHONE JACK JY6312 W/CLIP	1
SW1	N52003261-0-01	SLIDE SWITCH 2P3T	1
SW201,SW204	N52003271-0-01	DUAL PUSH SWITCH DPDT (SPUN22)	1
SW202	N52003121-0-01	2P2T ALPS SPUN W/O FRAME	1
SW205P ⚠	5200-3481-0	POWER SWITCH TV-3 3A/250V	1
SW901,SW902	N52003251-0-01	SLIDE SWITCH DPDT	2
VR201	N47503676-0	VR BASS 2X50KC W/WASHER & NUT	1
VR202	N47503646-0	VR TREBLE 2X10KC W/WASHER & NUT	1
VR203	N47503656-0	VR BALANCE 1X10KW W/WASHER & NUT	1
VR901A	N47503706-0	MOTOR DRIVE RM (20KBX4) RK16314MCL	1

NOTE : - THE COMPONENTS IDENTIFIED BY ⚠ MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- <*AH > : USA, CANADIAN MODEL ONLY.
<*B >: UK MODEL ONLY.
<*C > : EUROPEAN MODEL ONLY.
- ITEMS WITH THE EXTENSION "T" ARE FOR THE 917 ONLY,
ITEMS WITH THE EXTENSION "P" ARE FOR THE 117 ONLY,
ALL OTHER ITEMS ARE COMMON PARTS.

ELECTRICAL PARTS LIST

Reference No	Part Number	Description
PUSH SWITCH BOARD		
PC BOARD		
⚠	1720-300C-0103	PCB NO COMPONENTS
	MI-20300C-01-S	PCB ASSEMBLY (917)
	MI-21460G-01-S	PCB ASSEMBLY (117)
SWITCH		
SW201	N52003271-0-01	DUAL PUSH SWITCH DPDT (SPUN22)
SLIDE SWITCH BOARD		
PC BOARD		
⚠	1720-300G-0103	PCB NO COMPONENTS
	MI-20300G-01-S	PCB ASSEMBLY (917)
	MI-21460H-01-S	PCB ASSEMBLY (117)
SWITCHES		
SW901-SW902	N52003251-0-01	SLIDE SWITCH DPDT
MOTOR POT ASSEMBLY		
PC BOARD		
⚠	1720-300D-0103	PCB NO COMPONENTS
	MI-20300D-01-S	PCB ASSEMBLY (917)
	MI-21460C-01-S	PCB ASSEMBLY (117)
ICS		
IC901A	N31303410-0	IC LB1642 MOTOR DRIVER
CAPACITORS		
C901A	157D-106M-5-II	CE 16V 10µF 20%
VARIABLE RES.		
VR901A	N47503706-0	MOTOR DRIVE RM (20KBX4) RK16314MCL
HEADPHONE ASSEMBLY		
PC BOARD		
⚠	1720-300E-0103	PCB NO COMPONENTS
	MI-20300E-01-S	PCB ASSEMBLY (917)
	MI-21460D-01-S	PCB ASSEMBLY (117)
PHONE JACK		
SK1	N21038401-0	6MM PHONE JACK JY6312 W/CLIP
PANEL ASSEMBLY		
PC BOARD		
⚠	1720-320A-0001	FRONT PANEL PCB - NO COMPONENTS
	MI-20320A-01-S	PCB ASSEMBLY (917)
	MI-21550A-01-S	PCB ASSEMBLY (117)
ICS		
IC701T	N31303840-0	MC14052BCP QUAD ANALOG SWITCH
IC702T	N31303590-0	DUAL JFET OPAMP TL062
IC703	3130-4930-0	IC TMS77C82 OTP BLANK
IC705	N31303600-0	MC14094BCP 8-BIT SIPO SR 3S
IC706	N31303450-0	IC X24COIP XICOR EEPROM
IC707-IC709	N31303600-0	MC14094BCP 8-BIT SIPO SR 3S

Reference No	Part Number	Description
IC710	N89100033-0	IR RECEIVER HC-341F
IC711	N31303630-0	70CT20 DISPLAY MPX
IC712	N31303640-0	MSC1162 ANODE/GRID DRIVER
TRANSISTORS		
Q701-Q702T	4860-0700-5	TR 2SC1815GR
CAPACITORS		
C701T	153F-682K-5-KW	CM 50V 6800pF 10%
C702T	150F-104K-5-II	CC 50V 0.1uF 10%
C703-C704	15CH-330J-5-IG	CAP-TEMP 0/60 33pF 5%
C707,C714T	157D-106M-5-II	CE 16V 10u 20%
C721	157E-225M-5-EI	CE 25V 2.2uF 20%
C722-C723	15CH-330J-5-IG	CAP-TEMP 0/60 33pF 5%
C724	157E-225M-5-EI	CE 25V 2.2uF 20%
C725	157F-106M-5-IU	CE 50V 10uF 20%
C790T	150F-104K-5-II	CC 50V 0.1uF 10%
DIODES		
D701,D707	4804-1480-C	DIODE 1N4148
D714-D717P	3700-3513-Y	LED 3MM YELLOW
D714-D717T	3700-4509-Y	LED 2MM YELLOW
D728,D730	4804-1480-C	DIODE 1N4148
D740P	3700-3513-Y	LED 3MM YELLOW
D740T	3700-4509-Y	LED 2MM YELLOW
RESISTORS		
R702T	4701-105J-C	RCF 1M OHM 1/8W 5%
R703T	4701-103J-C	RCF 10K OHM 1/8W 5%
R706T-R707T	4701-103J-C	RCF 10K OHM 1/8W 5%
R724T	4701-561J-C	RCF 560 OHM 1/8W 5%
R725P	4701-103J-C	RCF 10K OHM 1/8W 5%
R728P-R738P	4701-472J-C	RCF 4.7K OHM 1/8W 5%
R791P	4701-331J-C	RCF 330 OHM 1/8W 5%
R792P	4701-681J-C	RCF 680 OHM1/8W 5%
SWITCHES		
S1-S2	N52003231-0-01	TACT SWITCH ALPS SKHQFH AMBER LED
S3T-S4T	N52003241-0-01	TACT SWITCH ALPS SKHQAC
S5	N52003231-0-01	TACT SWITCH ALPS SKHQFH AMBER LED
S6	N52003241-0-01	TACT SWITCH ALPS SKHQAC
S7	N52003201-0-01	TACT SWITCH ALPS SKWQFG GREEN LED
S8T-S10T	N52003241-0-01	TACT SWITCH ALPS SKHQAC
S11	N52003231-0-01	TACT SWITCH ALPS SKHQFH AMBER LED
S12	N52003241-0-01	TACT SWITCH ALPS SKHQAC
S13-S14	N52003201-0-01	TACT SWITCH ALPS SKWQFG GREEN LED
S15	N52003241-0-01	TACT SWITCH ALPS SKHQAC
S16-S17T	N52003201-0-01	TACT SWITCH ALPS SKWQFG GREEN LED
RESONATOR		
X701-X702	N27030120-0	CERAMIC RESONATOR CSA 4.91MG
TONE CONTROL ASSEMBLY PC BOARD		
⚠	1720-300B-0103	PCB NO COMPONENTS
	MI-20300B-01-S	PCB ASSEMBLY (917)
	MI-21460A-01-S	PCB ASSEMBLY (117)
ICS		
IC204	N31303680-0	IC NJM2043D DUAL OP AMP.
IC207-IC208	N31303680-0	IC NJM2043D DUAL OP AMP.
TRANSISTORS		
Q201-Q204	N485363BL-5	TR N-JFET 2SK363BL

Reference No	Part Number	Description
DIODES		
D201-D204	4804-1480-C	DIODE 1N4148
CAPACITORS		
C216-C218	157E-106M-5-IU	CE 25V 10µF 20%
C219-C222	153I-224J-9-NL	CM 63V 0.22µF 5%
C225-C226	157E-106M-5-IU	CE 25V 10µF 20%
C227-C228	153F-823J-5-SY	CM 50V 0.082µF 5%
C229-C230	153I-474J-9-NO	CM 63V 0.47µF 5%
C231-C232	157D-476M-5-KW	CE 16V 47µF 20%
C235-C236	157C-107M-5-IU	CE 10V 100µF 20%
C237-C241	157F-105M-5-IU	CE 50V 1µF 20%
C243-C244	157C-107M-5-IU	CE 10V 100µF 20%
C268-C269	157E-106M-5-IU	CE 25V 10µF 20%
C291-C292	157D-476M-5-KW	CE 16V 47µF 20%
C295-C296	153F-183J-5-KP	CM 50V 0.018µF 5%
C297-C298	153F-104J-5-SY	CM 50V 0.1µF 5%
VARIABLE RES.		
VR201	N47503676-0	VR BASS 2X50KC W/WASHER & NUT
VR202	N47503646-0	VR TREBLE 2X10KC W/WASHER & NUT
VR203	N47503656-0	VR BALANCE 1X10KW W/WASHER & NUT
SWITCHES		
SW202	N52003121-0-01	2P2T ALPS SPUN W/O FRAME
PROCESSOR ASSEMBLY PC BOARD		
⚠	1720-310A-0102	PCB NO COMPONENTS
	MI-20310A-01-S	PCB ASSEMBLY(917,117)
ICS		
IC109	3130-2020-1	IC UPD7805H 1A 5V
IC201	N31303710-0	IC TC9163N HV ANALOG SWITCH
IC203	N31303680-0	IC NJM2043D DUAL OP AMP.
IC211-IC212	3130-0890-0	IC NJM4558D DUAL OP AMP
IC220	N31303730-0	IC TC9164N HV ANALOG SW
IC221	3130-0890-0	IC NJM4558D DUAL OP AMP.
IC301-IC302	N31303660-0	IC NJM2068D DUAL LN-OP AMP.
IC303	N31303670-0	IC SSM2404 QUAD ANALOG SWITCH
IC304	N31303680-0	IC NJM2043D DUAL OP AMP.
IC305-IC307	N31303660-0	IC NJM2068D DUAL LN-OP AMP.
IC308-IC309	N31303690-0	IC TC9176 VOLUME CONTRO
IC310	N31303660-0	IC NJM2068D DUAL LN-OP
IC311	N31304080-0	IC TL072 DUAL FET OP AMP.
IC501	N31303700-0	IC NJM2177 DOLBY PROLOGIC
IC502	N31303710-0	IC TC9163N HV ANALOG SWITCH
IC505	N31303660-0	IC NJM2068D DUAL LN-OP AMP.
IC506	3130-4870-0	IC NJU9702 OR NJU9701 FILTER/DELAY
IC507-IC508	3130-0890-0	IC NJM4558D DUAL OP AMP.
TRANSISTORS		
Q301-Q302	N485363BL-5	TR N-JFET 2SK363BL
Q305-Q306	N48600660-5	TR 2SA1015GR
Q307-Q315	4860-0700-5	TR 2SC1815GR
Q316-Q317	N48600660-5	TR 2SA1015GR
Q318-Q320	4860-0700-5	TR 2SC1815GR
Q703-Q704	N48600660-5	TR 2SA1015GR
Q705	N4851815Y-5	TR 2SC1815-Y HFE 120-240
Q901	N48600660-5	TR 2SA1015GR

Reference No	Part Number	Description
DIODES		
D301-D302	4804-1480-C	DIODE 1N4148
D303-D306	4837-7V51-2	ZENER 1/2W 7.5V
D307-D308	4804-1480-C	DIODE 1N4148
D309	4804-1480-2	DIODE 1N4148
D320-D321	4804-1480-C	DIODE 1N4148
D501-D502	4804-1480-C	DIODE 1N4148
D702-D703	4804-1480-C	DIODE 1N4148
COILS		
L001	1801-1R5M-M	CHOKE COIL 1.5UH 20%
CAPACITORS		
C215-C217	157E-106M-5-IU	CE 25V 10µF 20%
C253-C254	157F-105M-5-IU	CE 50V 1µF 20%
C273-C274	157F-225M-5-IU	CE 50V 2.2µF 20%
C275-C276	157D-476M-5-KW	CE 16V 47µF 20%
C277-C287	157E-106M-5-IU	CE 25V 10µF 20%
C301-C308	157D-107M-5-KW	CE 16V 100µF 20%
C309-C310	157E-106M-5-IU	CE 25V 10µF 20%
C311-C312	157E-475M-5-IU	CE 25V 4.7µF 20%
C322-C323	157E-106M-5-IU	CE 25V 10µF 20%
C324	157F-105M-5-IU	CE 50V 1µF 20%
C325	157E-106M-5-IU	CE 25V 10µF 20%
C326	157F-105M-5-IU	CE 50V 1µF 20%
C327	157E-106M-5-IU	CE 25V 10µF 20%
C332	157E-106M-5-IU	CE 25V 10µF 20%
C333	157D-106M-5-IU	CE 16V 10µF 20%
C334-C335	157E-106M-5-IU	CE 25V 10µF 20%
C336	153F-223K-5-LQ	CM 50V 0.022µF 10%
C337	153F-103K-5-KM	CM 50V 0.01µF 10%
C338	153F-223K-5-LQ	CM 50V 0.022µF 10%
C339	153F-103K-5-KM	CM 50V 0.01µF 10%
C347	157D-106M-5-IU	CE 16V 10µF 20%
C348	15CH-180K-5-GG	CAP-TEMP 0/60 18PF 10%
C351-C352	157E-106M-5-IU	CE 25V 10µF 20%
C353-C354	157D-476M-5-IU	CE 16V 47µF 20%
C355-C361	157E-106M-5-IU	CE 25V 10µF 20%
C362-C365	157D-476M-5-IU	CE 16V 47µF 20%
C365-C366	157E-106M-5-IU	CE 25V 10µF 20%
C367-C368	153F-104K-5-PT	CM 50V 0.1µF 10%
C380-C383	157F-105M-5-IU	CE 50V 1µF 20%
C501	157D-475M-5-IU	CE 16V 4.7µF 20%
C502-C504	153F-224K-5-MIB	CM 50V 0.22µF 10%
C505	153F-684K-5-KW	CM 50V 0.68µF 10%
C506	153F-472K-5-KW	CM 50V 4700PF 10%
C507	153F-562K-5-KW	CM 50V 5600PF 10%
C508	158F-471J-5-KW	CP 50V 470PF 5%
C509	157D-227M-5-OW	CE 16V 220µF 20%
C510	153F-473K-4-RY	CM 50V 0.047µF 10%
C511	153F-562K-5-KW	CM 50V 5600PF 10%
C512-C513	157E-106M-5-IU	CE 25V 10µF 20%
C514	153F-224K-5-MIB	CM 50V 0.22µF 10%
C515-C519	157E-106M-5-IU	CE 25V 10µF 20%
C520	157D-226M-5-IU	CE 16V 22µF 20%
C521	153F-472K-5-KW	CM 50V 4700PF 10%
C522	157D-475M-5-IU	CE 16V 4.7µF 5%
C523-C524	153F-224K-5-MIB	CM 50V 0.22µF 10%
C525-C527	153F-104K-5-PT	CM 50V 0.1µF 10%
C528-C529	153F-223K-5-LQ	CM 50V 0.022µF 10%
C530	158F-681J-5-KW	CP 50V 680PF 5%
C531	153F-473K-4-RY	CM 50V 0.047µF 10%
C532-C533	153F-104K-5-PT	CM 50V 0.1µF 10%

Reference No	Part Number	Description
C535-C536	157E-106M-5-IU	CE 25V 10µF 20%
C537-C538	153F-104K-5-PT	CM 50V 0.1µF 10%
C539	153F-473K-4-RY	CM 50V 0.047µF 10%
C540	158F-681J-5-KW	CP 50V 680PF 5%
C541-C544	157E-106M-5-IU	CE 25V 10µF 20%
C548-C550	153F-563K-5-OS	CM 50V 0.056µF 10%
C552-C554	153F-563K-5-OS	CM 50V 0.056µF 10%
C556	153F-563K-5-OS	CM 50V 0.056µF 10%
C557	153F-222K-5-KW	CM 50V 2200PF 10%
C558	153F-563K-5-OS	CM 50V 0.056µF 10%
C559	153F-222K-5-KW	CM 50V 2200PF 10%
C569	157F-105M-5-IU	CE 50V 1µF 20%
C570	153F-562K-5-KW	CM 50V 5600PF 10%
C571	158F-561J-5-KW	CP 50V 560PF 5%
C572-C573	153F-473K-4-RY	CM 50V 0.047µF 5%
C574	157D-107M-5-KW	CE 16V 100µF 20%
C576	153F-104K-5-PT	CM 50V 0.1µF 10%
C577	157D-476M-5-IU	CE 16V 47µF 20%
C580	158F-561J-5-KW	CP 50V 560PF 5%
C581	153F-104K-5-PT	CM 50V 0.1µF 10%
C582	153F-562K-5-KW	CM 50V 5600PF 10%
C583	157F-105M-5-IU	CM 50V 1µF 20%
C584	153F-103K-5-KM	CM 50V 0.01µF 10%
C585	157E-106M-5-IU	CE 25V 10µF 20%
C586-C599	157F-105M-5-IU	CE 50V 1µF 20%
C901-C920	157E-106M-5-IU	CE 25V 10µF 20%
RESISTORS		
R590	4715-1003-2-K	RMF 100K OHM 1/4W 1%
VARIABLE RES.		
VR301-VR302	N47561030-3-11	SEMI-FIXED 10K OHM
SWITCHES		
SW1	N52003261-0-01	SLIDE SWITCH 2P3T
CRYSTAL		
XL501	N23000920-0	CRYSTAL 2MHZ HC-49/U
RCA JACK		
0104-0105	N21038506-2	6P RCA JACK R/W NI
0109-0110	N21038506-2	6P RCA JACK R/W NI
J9/10	N21037604-2	4P RCA JACK R/W NI
J701	N21039102-0	2P RCA JACK ORG
PSU ASSEMBLY		
PC BOARD		
⚠	1720-300B-0102	PCB NO COMPONENTS
	MI-20310B-01-S	PCB ASSEMBLY (917AH)
	MI-20310B-02-S	PCB ASSEMBLY (917B,C)
	MI-20310B-03-S	PCB ASSEMBLY (117AH)
	MI-20310B-04-S	PCB ASSEMBLY (117C)
ICS		
IC602	3130-2020-1	IC UPD7805H 1A 5V
IC603	N31302520-1	IC 7812 12V REGULATOR
IC604	N31303800-0	IC UPC79M12HF REGULATOR
TRANSISTORS		
Q107	N485240GR-5	TR 2SC2240GR
Q108	N485D613D-5	TR 2SD613D
Q605	N4851815Y-5	TR 2SC1815-Y HFE 120-240

Reference No		Part Number	Description
DIODES			
D101		N48400630-0	BRIDGE DIODE 2W02G
D102		4804-0010-1	DIODE 1N4001
D103-D106		4804-0020-1	DIODE 1N4002
D107		N48400650-0	ZENER 1/2W 33V 5%
D108		N48400640-0	ZENER 1/2W 28V HZ273
D110		N48400630-0	BRIDGE DIODE 2W02G
CAPACITORS			
C101	⚠	N89100049-0	CAP 400V 4700P DE7150F472MVA1KC
C102-C103		8910-0007-0	CAP 35V 4700U 35V 16X35
C104T		635N-0001-0	JUMPER #23 TAPE & WHEEL
C104P	⚠	N89100049-0	CAP 400V 4700P DE7150F472MVA1KC
C106-C107		157Q-106M-5-IU	CE 35V 10µF 20%
C108-C109		157E-106M-5-IU	CE 25V 10µF 20%
C110-C111		157D-106M-5-II	CE 16V 10µF 20%
C114-C117		157F-227M-5-S5	CE 50V 220µF 20%
C118		157I-476M-5-OV	CE 63V 47µF 20%
C119		157I-106M-5-IU	CE 63V 10µF 20%
C120		157F-227M-5-S5	CE 50V 220µF 20%
C122		157I-106M-5-IU	CE 63V 10µF 20%
C124		157D-228M-5-W9	CE 16V 2200µF 20%
RELAY			
RLY101	⚠	N45000110-0	RELAY 12V-DC
SWITCH			
SW205P	⚠	5200-3481-0	POWER SWITCH TV-3 3A/250V
FUSES			
F101-F102*AH	⚠	5120-0010-0	FUSE 250V 800MA TIME LAG UL/CSA
F104*AH	⚠	N51005010-1A	FUSE 250V 500MA SLOW BLOW UL/CSA
F101-F102T*B,C & P*C	⚠	5120-0011-0	FUSE 250V 800MA TIME LAG LBC SEMKO
F104T*B,C & P*C	⚠	N51005010-1B	FUSE 250V 500MA SLOW BLOW LBC VDE/SEMKO
FH101-F104		4131-9131-0	FUSE HOLDER 6.5MM PITCH RECT
TRANSFORMER			
T1	⚠	N18062104-0	TRANSFORMER MAIN 614C
T2	⚠	N18062096-0	TRANSFORMER EI35 115/230VDC 160MA
AC OUTLET TERMINAL			
0100*AH	⚠	N41520571-0	AC OUTLET COVER PLATE
0151*AH	⚠	N21035802-0	AC OUTLET 125V 15A UL
OUTLET*AH (917 ONLY)	⚠	N4707275J-2	RCF 2.7M Ohm 1/2W 5% AT (SAFETY DISCHARGE)
TUNER ASSEMBLY (917 ONLY)			
PC BOARD			
	⚠	1720-300A-0103	PCB NO COMPONENTS
		MI-20300A-01-S	PCB ASSEMBLY (917AH)
		MI-20300A-02-S	PCB ASSEMBLY (917B,C)
ICS			
IC401		3130-0890-0	IC NJM4558D DUAL OP AMP.
IC701		N31303430-0	IC LM7000 DTS
IC702*AH		N89100034-0	TUNER MODULE FE407-A16
IC702*C		1300-0606-0	TUNER MODULE FE407-G58

Reference No	Part Number	Description
IC703	N31303390-0	IC LA1266 FM/AM TUNER
IC704	N31303400-0	IC LA3401 PLL MPX
TRANSISTORS		
Q005-Q009	485C-930E-5	TR 2SC930E HFE 100-200
Q701-Q703	4860-0700-5	TR 2SC1815GR
Q704	N48600660-5	TR 2SA1015GR
Q710-Q713	4860-0700-5	TR 2SC1815GR
Q714	N48600660-5	TR 2SA1015GR
DIODES		
D401	4804-1480-C	DIODE 1N4148
D701-D702	N4801N60P-1	GERMANIUM DIODE 1N60P
D703-D704	484C-321D-5	SVC321-D AM CAR. DIODE
COILS		
L701	1801-2R2M-M	COIL 2.2μH 20%
L702*C	2701-0609-4	BAND PASS FILTER 64-108MHZ
L703	1801-2R2M-M	COIL 2.2μH 20%
L704	N56002276-S	AM COIL 5564102600
L705	N56002286-S	AM OSC COIL 5564312800
L706	N56002256-S	FM COIL PRIMARY
L707	N56002266-S	FM COIL SECONDARY
L708	N56002246-S	AM IF COIL
L710	N1801680M-M	COIL 68μH 20%
CAPACITORS		
C701	1551-0210-0	TRIMMER 5.2-30PF
C703	157B-107M-5-KM	CE 6.3V 100μF 20%
C704	157F-107M-5-OW	CE 50V 100μF 20%
C705	157F-335M-5-IU	CE 50V 3.3μF 20%
C707	157F-474M-5-IU	CE 50V 0.47μF 20%
C709	157Q-474M-5-IU	CE 35V 0.47μF 20%
C712	157D-106M-5-IU	CE 16V 10μF 20%
C721	1551-0210-0	TRIMMER 5.2-30PF
C725	157D-106M-5-IU	CE 16V 10μF 20%
C726	157F-475M-5-IU	CE 50V 4.7μF 20%
C733	157F-335M-5-IU	CE 50V 3.3μF 20%
C738	157F-335M-5-IU	CE 50V 3.3μF 20%
C739	158F-101J-5-KW	CP 50V 100PF 5%
C741	157D-107M-5-KW	CE 16V 100μF 20%
C742	157F-104M-5-IU	CE 50V 0.1μF 20%
C743	157D-106M-5-IU	CE 16V 10μF 20%
C744	158F-391J-5-KW	CP 50V 390PF 5%
C745	157D-476M-5-IU	CE 16V 47μF 20%
C746	157D-107M-5-KW	CE 16V 100μF 20%
C747	157F-105M-5-IU	CE 50V 1μF 20%
C748	157F-224M-5-IU	CE 50V 0.22μF 20%
C749-C750	157F-105M-5-IU	CE 50V 1μF 20%
C751	157D-106M-5-IU	CE 16V 10μF 20%
C752-C753*AH	158F-911J-5-KW	CP 50V 910PF 5%
C752-C753*C	158F-431J-5-KW	CP 50V 430PF 5%
C754-C755	153F-152J-5-KW	CM 50V 1500PF 5%
C756-C757	157D-106M-5-IU	CE 16V 10μF 20%
VARIABLE RES.		
R736	N47564730-3-11	SEMI-FIXED 47K OHM
R753	N47564730-3-11	SEMI-FIXED 47K OHM
FILTERS		
FL01-FL03*AH	N27010546-1-0	CERAMIC FILTER 10.7MHZ ML-A
FL01-FL03*C	N27010556-1-0	CERAMIC FILTER 10.7MHZ MZ2-A
FL703	N56002296-S	FTZ COIL

Reference No	Part Number	Description
FL704-FL705	N56002236-S	FILTER COIL 19KHZ
FL706	2701-0066-0	CERAMIC FILTER 450 KHZ
RESONATOR		
X102	2703-0020-0	CERAMIC RESONATOR CSB456F11
CRYSTAL		
X701	N23000440-0	CRYSTAL 7.2MHZ 20PPM
ANTENNA TERMINAL		
0102*AH	N21070641-0	ANTENNA TERMINAL F-TYPE
0102*B,C	N21070681-0	ANTENNA TERMINAL DIN-TYPE
TUNER I/P ASSEMBLY (117 ONLY)		
PC BOARD	MI-21460F-01-S	PCB ASSEMBLY
RCA JACK		
0901P	2113-0700-0	RCA JACK R/W NI-PLATED
LED ASSEMBLY (117 ONLY)		
PC BOARD	MI-21460E-01-S	PCB ASSEMBLY
LED		
LED1	N37003517-RG	LED RED/GREEN L-469 HGW
VIDEO ASSEMBLY		
PC BOARD		
⚠	1720-300F-0103	PCB NO COMPONENTS
	MI-20300F-01-S	PCB ASSEMBLY (917)
	MI-21460B-01-S	PCB ASSEMBLY (117)
ICS		
IC601	N31303740-0	IC NJM2246 3IP VIDEO SWITCH
IC602	N31304130-0	IC PCA8515P/009 OSD
IC603	N31303760-0	IC NJM2217 VIDEO SUPERIMPOSER
IC604	N31303740-0	IC NJM2246 3IP VIDEO SWITCH
IC605	N31304050-0	IC NJM2234D 3I/P VIDEO SWITCH
TRANSISTORS		
Q601-Q604	485C-930E-5	TR 2SC930E
DIODES		
D601-D602	4804-1480-C	DIODE 1N4148
CAPACITORS		
C600	153F-103J-5-KW	CM 50V 0.01µF 5%
C601-C606	157E-106M-5-IU	CE 25V 10µF 20%
C607	157F-105M-5-IU	CE 50V 1µF 20%
C609-C611	157E-106M-5-IU	CE 25V 10µF 20%
C618	157E-106M-5-IU	CE 25V 10µF 20%
C621-C622	157E-106M-5-IU	CE 25V 10µF 20%
C624	157C-108M-5-S5	CE 10V 1000µF 20%
C625	153F-222K-5-KW	CM 50V 2200PF 10%
C626	157C-108M-5-S5	CE 10V 1000µF 20%
C628	157D-107M-5-KW	CE 16V 100µF 20%
C629	157E-106M-5-IU	CE 25V 10µF 20%
C631	157E-106M-5-IU	CE 25V 10µF 20%
C632	157C-108M-5-S5	CE 10V 1000µF 20%

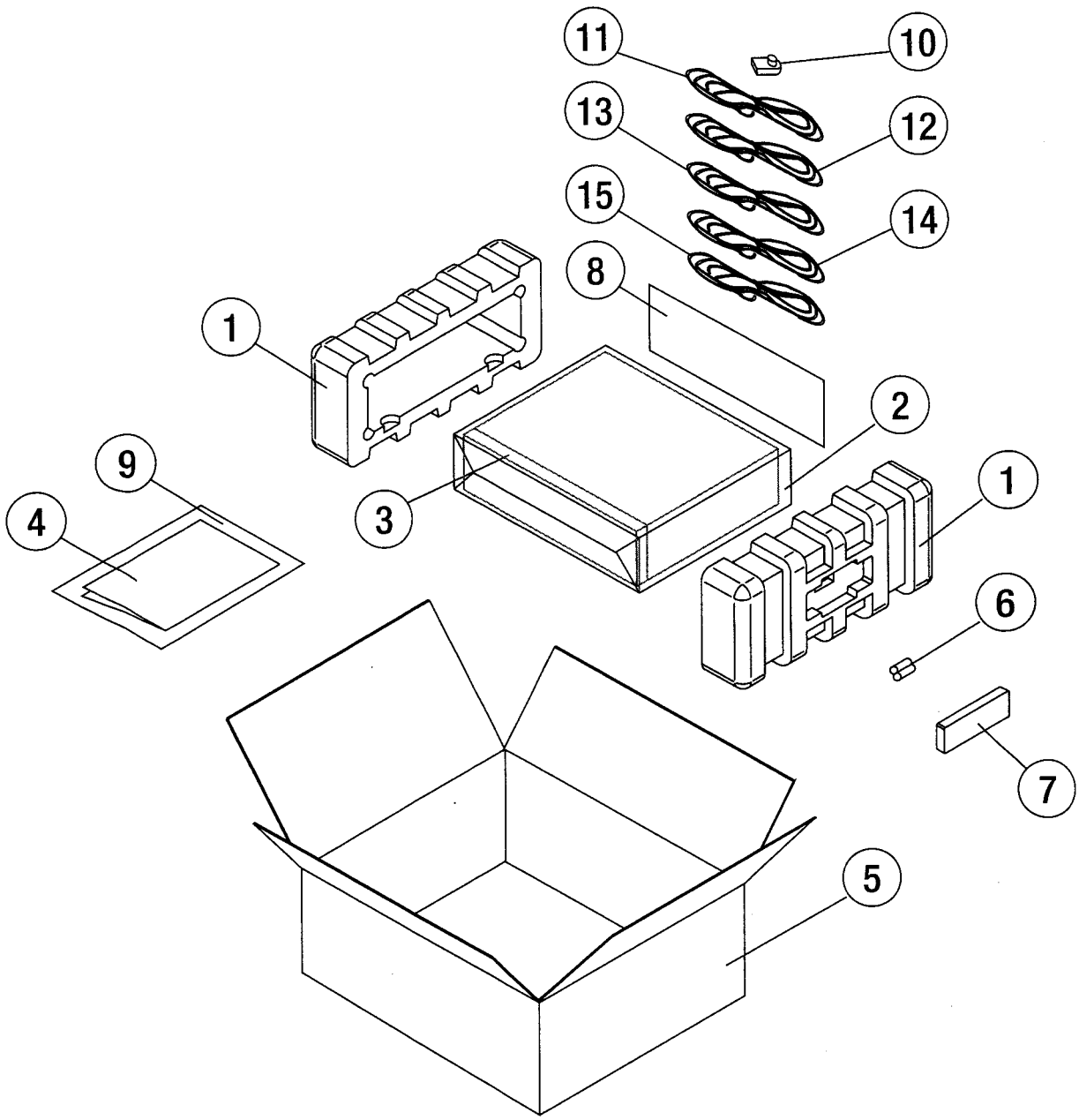
Reference No	Part Number	Description
C634-C635	157E-106M-5-IU	CE 25V 10μF 20%
C636	157C-108M-5-S5	CE 10V 1000μF 20%
C637	157F-105M-5-IU	CE 50V 1μF 20%
VARIABLE RES.		
R619	N47564730-3-11	SEMI-FIXED 47K OHM
CRYSTAL		
XL601	N23000930-0	CRYSTAL 3.58MHZ HC-49/U
SOCKETS		
J601N	21038201-0	1P RCA SOCKET,YELLOW
J602N	21038201-0	1P RCA SOCKET,YELLOW
J603N	21038201-0	1P RCA SOCKET,YELLOW
J604N	21038301-0	1P S-VHS SOCKET
J605N	21038301-0	1P S-VHS SOCKET
J606N	21038301-0	1P S-VHS SOCKET
J607N	21038201-0	1P RCA SOCKET,YELLOW
J608N	21038201-0	1P RCA SOCKET,YELLOW
J609N	21038301-0	1P S-VHS SOCKET
J610N	21038301-0	1P S-VHS SOCKET

NOTE : - THE COMPONENTS IDENTIFIED BY ⚠ MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

- <*AH > : USA, CANADIAN MODEL ONLY.
<*B >: UK MODEL ONLY.
<*C > : EUROPEAN MODEL ONLY.

- ITEMS WITH THE EXTENSION "T" ARE FOR THE 917 ONLY,
ITEMS WITH THE EXTENSION "P" ARE FOR THE 117 ONLY,
ALL OTHER ITEMS ARE COMMON PARTS.

117/917 PACKING DIAGRAM



117/917 PACKING LIST

Item	Part No	Description	Qty
1	1490-1873-0	POLYFOAM END CAP	2
2	N14971072-3	POLYBAG	1
3	N14971252-0	EPE COVER	1
4P	4301-3611-1	INSTRUCTION MANUAL	1
4T	4301-3523-1	INSTRUCTION MANUAL	1
5	N14763800-0	CARTON BOX	1
6	4060-0630-0	BATTERIES	2
7	N89001100-0	REMOTE CONTROL	1
8	1497-1320-0	POLYBAG	1
9	N14971062-0	MANUAL POLYBAG	1
10T*AH	N21036101-0	RF CONNECTOR PLUG F-Type	1
10T*C	N21036201-0	RF CONNECTOR PLUG DIN-Type	1
11T	N21070661-1	"T" 300OHM ANTENNA	1
12T	N70093220-0	200CM WHITE AWG22	1
13	N21039001-0	VIDEO YEL RCA PLUGS	2
14	N21038901-0	MONO BLK RCA PLUGS	1
15	N21038801-0	STEREO R/W RCA PLUGS	2

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